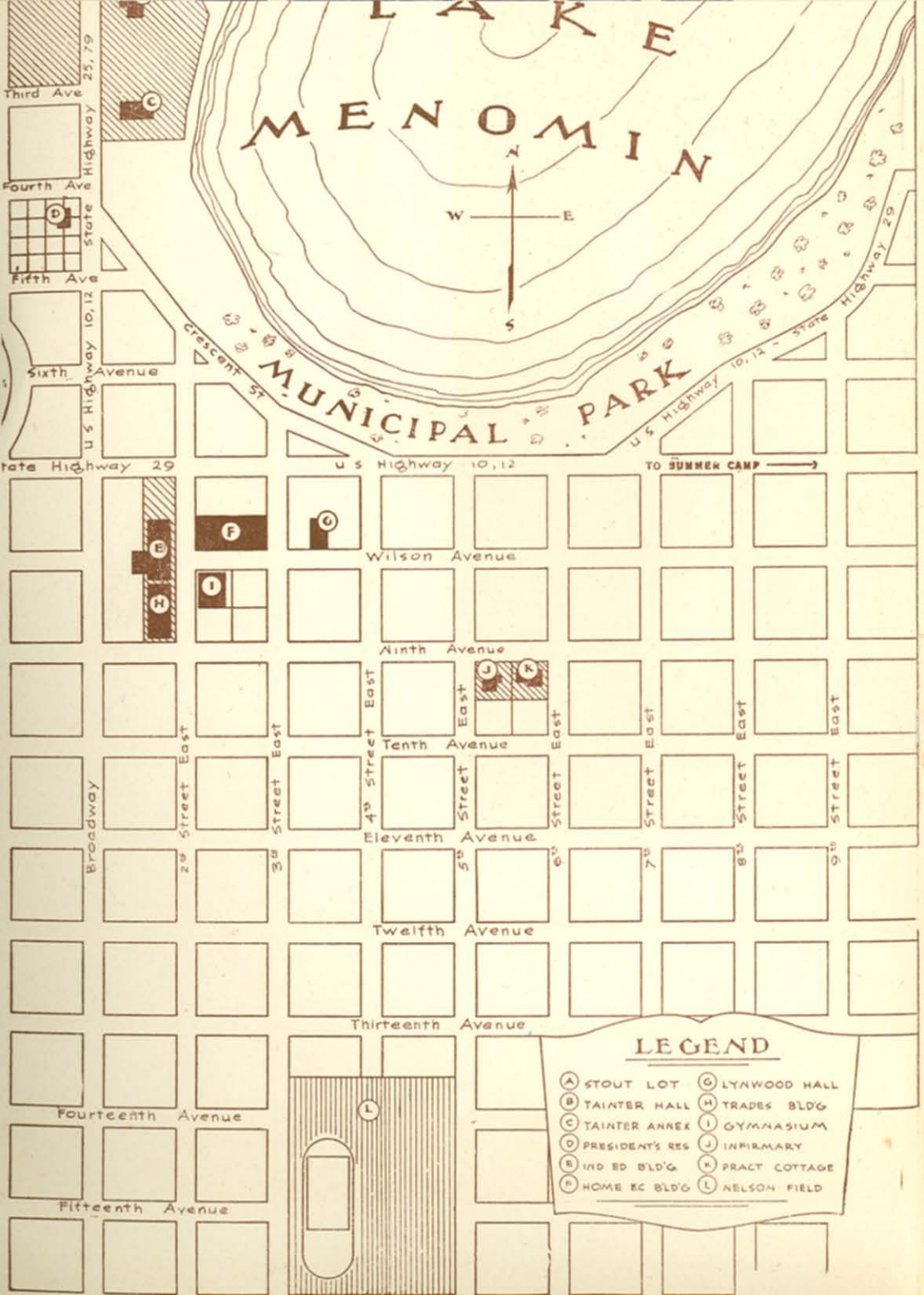
1944-1945

CATALOG

BULLETIN OF

THE STOUT INSTITUTE

MENOMONIE » » » WISCONSIN



ANNUAL CATALOG

GENERAL INFORMATION AND
COURSES OF STUDY FOR THE SCHOOL YEAR

1944-1945

THE STOUT INSTITUTE

MENOMONIE, WISCONSIN

Entered as second-class matter March 10, 1927 at the Post Office at Menomonie, Wis., under the act of August 12, 1914

TIMELY NOTATION

Wars inaugurate changes. Never in wars between great nations do the people involved think the same, act the same or feel the same socially, economically, or politically before and after the war period. In postwar months and years educational ideals, purposes and procedures change in compliance with mass thinking. The curricula of colleges is due for modification as well as courses of instruction on the secondary level. These facts must be faced. New conditions must be recognized and respected.

And so in compliance with time's demands, Stout in the first pages of its current catalog recognizes new responsibilities and willingly accepts the challenge.

Year after year this catalog has emphasized its major purpose in America's educational program. We here referred to our pioneering experience in special fields of Home Economics and Industrial Education, and announced our intention to continue to operate as "the only college in America limiting its training program exclusively to the preparation of teachers of Industrial and Home Economics Education."

This year and for several years while conditions present new demands, Stout will continue to place special emphasis on its major purpose, but it will offer educational opportunity to any high school graduate in the usual college courses in English, social science, science, mathematics, history and government, in progress toward any college degree. Stout will be in position too to teach the subjects usually emphasized in Army and Navy elementary engineering courses, or shop and laboratory courses in preparation for industrial employment.

The curriculum as defined in this catalog carries a number of revisions and adaptations in terms of modern problems.

COLLEGE CALENDAR

SECOND SEMESTER 1943-1944

Monday, January 31, Registration for Second Semester.
Tuesday, February 1, Second Semester Classes Convene.
Sunday, May 28, Baccalaureate Address.
Friday, June 2, Commencement.

SUMMER SESSION 1944

Monday, June 19, Summer Session Begins.
Friday, August 18, Summer Session Closes.

REGULAR SESSION 1944-1945

Monday, September 11, Regular Session Begins.
Tuesday, September 12, Registration for Freshmen and Other New Students.
Wednesday, September 13, Registration for Matriculated Students.
Thursday, September 14, Classes Convene.
Wednesday, December 20, Christmas Vacation Begins.
Wednesday, January 3, 1945, Classes Resume.
Friday, January 26, First Semester Ends.
Monday, January 29, Registration Day for Second Semester.
Tuesday, January 30, Classes Convene.
Sunday, May 27, Baccalaureate Address.
Friday, June 1, Commencement.

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BOARD OF TRUSTEES

(January 1, 1944)

	Term Expires
Employee Members	
Peter T. Schoemann, Milwaukee	1945
Emil Waldow, Green Bay	1947
John Wiechers, Racine	1949
Agricultural Members	
Robert L. Pierce, Menomonie	1945
Frank C. Horyza, Superior	1947
Michael G. Eberlein, Shawano	1949
Employer Members	
Jessel S. Whyte, Kenosha	1945
A. A. Laun, Kiel	1947
Fred Vogt, Milwaukee	1949

Ex-Officio Members

John Callahan, State Superintendent of Public Instruction, Madison
Voyta Wrabetz, State Industrial Commission, Madison

Officers of the Board

President: Peter T. Schoemann, Milwaukee
Acting Secretary: Lloyd E. Berray, Madison

Stated Meetings of the Board

Regular quarterly meetings of the Board are held on the fourth Tuesday in March, June, and September, and on the third Tuesday in December.

OFFICERS OF ADMINISTRATION

BURTON EDSAL NELSON, President.
CLYDE A. BOWMAN, Dean, Division of Industrial Education. Director of Summer Session.
RUTH E. MICHAELS, Dean, Division of Home Economics. Dean of Women.
MERLE M. PRICE, Dean of Men.
GERTRUDE M. O'BRIEN, Registrar.
MINNIE J. BECKER, Secretary to the President.
BRYARD M. FUNK, Business Manager.
RUDOLPH ROEN, Superintendent of Buildings.
H. O. STROZINSKY, Chief Engineer.
MRS. DELMA PROUDLOCK, College Nurse.
DR. GEORGE BRYANT, College Physician.
RUTH R. PHILLIPS, Director of Halls and Housing, Hostess of Tainter Hall.
MRS. MAE F. MOSES, Hostess of Tainter Annex.
MRS. CHARLOTTE GIST, Hostess of Lynwood Hall.

* * *

LILLIAN M. FROGGATT, Librarian.
MRS. BEULAH C. HOWISON, Assistant Librarian.
MYRTLE STRAND, Assistant Librarian.

* * *

BERNARDINE FASBENDER, Office Assistant—Stenographer.
SARA SPEIDEL, Office Assistant—Stenographer.
AGNES WINSTON, Office Assistant—Stenographer.

FACULTY

* * * * *

BURTON EDSAL NELSON, President.
Pennsylvania State Normal School, Diploma, 1884; Western Normal College, B. S., 1891; M. S., 1895; The Stout Institute since 1923.

KETURAH ANTRIM, Physical Education.
Lake Forest University, Lake Forest, Illinois, B. A., 1923; University of Wisconsin, Ph. M., 1932; The Stout Institute since 1936.

WILLIAM R. BAKER, Printing and Publications.
Northern Illinois Teachers College, Diploma, 1913; Merganthaler Linotype School, Certificate, 1920; The Stout Institute, B. S., 1925; University of Minnesota, M. A., 1936; The Stout Institute since 1933.

CLYDE A. BOWMAN, Industrial Education.
State Normal, River Falls, Wisconsin, Diploma, 1907; The Stout Institute, Diploma, 1909; Columbia University, B. S., 1915; University of Wisconsin, M. S., 1927; The Stout Institute since 1919.

ARTHUR G. BROWN, Education.
Macalaster College, B. S., 1914; University of Wisconsin, M. S., 1928; The Stout Institute since 1920.

MARY LOUISE BUCHANAN, Foods and Nutrition.
Iowa State College, Ames, Iowa, B. S., 1915; M. S., 1927. The Stout Institute since 1927.

GERTRUDE L. CALLAHAN, English.
University of Chicago, Ph. B., 1912; University of Wisconsin, Ph. M., 1927; The Stout Institute since 1927.

DARVEY E. CARLSEN, Printing.
The Stout Institute, B. S., 1944; The Stout Institute since 1942.

LILLIAN CARSON, Related Arts.
University of Chicago, Ph. B., 1919; M. S., 1926; The Stout Institute since 1927.

DWIGHT D. CHINNOCK, Sheet Metal & General Metal.
River Falls Teachers College, Diploma, 1923; The Stout Institute, B. S., 1937; University of Minnesota, M. A., 1941; The Stout Institute since 1940.

HAROLD R. COOKE, Director of Music.
Certificates in Mus. Theory from Vienna, Austria and New England Conservatory of Music. Minneapolis College of Music, B. Mus., 1933; Mac Phail School of Music, M. Mus. Ed., 1940; The Stout Institute since 1934.

ELEANOR H. COX, Chemistry.
University of Wisconsin, B. A., 1921; M. A., 1939; The Stout Institute since 1942.

MARGARET WINNONA CRUISE, Foods, and Nutrition.
University of Toronto, B. A., 1912; Columbia University, M. A., 1918; The Stout Institute since 1927.

MARCELINE ERICKSON, Speech.
Columbia College of Expression, Chicago, Ill., 1927 and 1928; Lombard College, B. A., 1929; University of Iowa, M. A., 1932; The Stout Institute since 1940.

EMILY FARNHAM, Related Art.
Kent State University, B. S., 1933; Ohio State University, M. A., 1934; The Stout Institute since 1941.

H. F. GOOD, Auto Mechanics, Electrical Work, Science.
Iowa State College, B S. in Electrical Engineering, 1913; B. S. in Agricultural Engineering, 1914; M. S., 1929; The Stout Institute since 1918.

DANIEL GREEN, Machine Drawing, General Drawing.
University of Chicago, B. S. 1914; University of Minnesota, M. A. 1932; The Stout Institute since 1924.

ANN HADDEN, Foods, Institutional Management.
Iowa State College, B. S., 1932; Kansas State College, M. S., 1940; The Stout Institute since 1940.

H. M. HANSEN, Advanced Woodwork.
The Stout Institute, Diploma, 1918; B. S., 1928; University of Minnesota, M. A., 1936; The Stout Institute since 1912.

MARGARET E. HARPER, Home Economics Education.
Kansas Wesleyan University, B. S., 1929; Kansas State College, M. S., 1943; The Stout Institute since 1943.

LILLIAN JETER, Clothing and Related Art.
Kansas State Agricultural College, B. S., 1916; Columbia University Teachers College, M. A., 1925; The Stout Institute since 1927.

DOROTHY JOHNSON, Home Economics Education.
Kirksville, Missouri, State Teachers College, B. S., 1928; University of Missouri, A. M., 1933; Teacher Trainer for Vocational Homemaking Education, State Board of Vocational and Adult Education, The Stout Institute since 1936.

RAY C. JOHNSON, Physical Education, Athletics.
State Teachers College, Moorhead, Minnesota, B. E., 1930; Columbia University, M. A., 1935; The Stout Institute since 1938.

FLOYD KEITH, General Metal, Sheet Metal.
River Falls Normal, Diploma, 1915; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1929; The Stout Institute since 1922.

RAY F. KRANZUSCH, Auto Mechanics, General Mechanics.
The Stout Institute, B. S., 1936; Iowa State College, M. S., 1941; The Stout Institute since 1924.

ANNE MARSHALL, Biological Science.
Denison University, Granville, Ohio, B. S., 1925; Ohio State University, M. A., 1928; Ph. D., 1939; The Stout Institute since 1939.

LAWRENCE N. MARX, Psychology and Education.
Kansas State College, Manhattan, B. S., 1932; M. S., 1933; Ohio State University, Ph. D., 1939; The Stout Institute since 1939.

MARY M. McCALMONT, Chemistry.
Westminister College, New Wilmington, Pennsylvania, B. S., 1906; University of Wisconsin, M. S., 1921; The Stout Institute since 1912.

RUTH E. MICHAELS, Home Economics Education.
The Stout Institute, Diploma, 1905; University of Chicago, Ph. B., 1922; Columbia University, M. A., 1923; The Stout Institute since 1927.

HAROLD C. MILNES, Machine Shop, Foundry, Patternmaking.
Armour Institute, Certificate, 1906; The Stout Institute, B. S., 1928; Iowa State College, M. S., 1936; The Stout Institute since 1916.

MILDRED MOORE, Home Economics Education.
Penn College, B. A., 1927; Iowa State College, M. S., 1943; The Stout Institute since 1943.

PAUL C. NELSON, Woodwork, Carpentry, Visual Education.
The Stout Institute, B. S., 1932; Iowa State College, M. S., 1934; The Stout Institute since 1926.

ELIZABETH E. NIELSEN, English.
Cornell College, Mt. Vernon, Iowa, B. A., 1930; Boston University, M. A., 1932; Northwestern University, Ph. D., 1943; The Stout Institute since 1941.

MERLE M. PRICE, Social Science.
State Teachers College, St. Cloud, Minnesota, Diploma, 1921; University of Minnesota, B. S., 1924; M. A., 1929; The Stout Institute since 1929.

HENRIETTE L. QUILLING, Home Economics Education. (on leave)
The Stout Institute, B. S., 1931; M. S., 1939; The Stout Institute since 1937.

J. E. RAY, Architectural, Mechanical and Freehand Drawing, Masonry, Building Construction.
Williamson Trade School, Diploma, 1908; The Stout Institute, B. S., 1922; Iowa State College, M. S., 1930; The Stout Institute since 1930.

CORYDON L. RICH, Mathematics and Science.
State Teachers College, Oshkosh, Wisconsin, Ed. B., 1929; University of Wisconsin, Ph. M., 1930; The Stout Institute since 1931.

MABEL C. ROGERS, Foods, and Nutrition.
Michigan State College, B. S., 1910; Columbia University, A. M., 1917; The Stout Institute since 1935.

BOYD CARLISLE SHAFER, History and Social Science. (on leave)
Miami University, B. A., 1929; State University of Iowa, M. A., 1930; Ph. D., 1932; The Stout Institute since 1932.

BENITA GROTE SMITH, Director of Nursery School.
Iowa State College, B. S., 1928; Merrill-Palmer School, Detroit; Iowa State College, M. S., 1941; The Stout Institute since 1943.

A. STEPHEN STEPHAN, Sociology and Economics.
University of Richmond, B. A., 1926; University of Chicago, M. A., 1930; University of Minnesota, Ph. D., 1936. The Stout Institute since 1939.

GLADYS TRULLINGER, Home Administration.
University of Nebraska, B. S., 1926; M. S., 1936; The Stout Institute since 1936.

F. E. TUSTISON, Mathematics, Science, General Mechanics.
Ohio Wesleyan University, B. S., 1909; University of Wisconsin, M. S., 1928; The Stout Institute since 1920.

HAZEL VAN NESS, Clothing.
Syracuse University, B. S., 1921; Columbia University, A. M., 1929; The Stout Institute since 1929.

LETITIA E. WALSH, Home Economics Education.
Iowa State Teachers College, B. A., 1915; Columbia University, M. A., 1920; The Stout Institute since 1920.

RAY A. WIGEN, Supervisor of Practice Teaching.
River Falls State Teachers College, Diploma, 1916; University of Minnesota, B. S., 1930; M. A., 1933; The Stout Institute since 1933.

EDUCATION AND NATIONAL DEFENSE

The war emergency makes education more vital than ever for the welfare of the nation. This is particularly true of the work at The Stout Institute. This emergency also calls for acceleration of college training wherever consistent with national and individual well being.

The curriculum requirements, the scholastic standards, the college regulations are not reduced, not changed in any essential particular; but some changes in the organization of the college courses are essential to aid in national defense.

The fact that Stout has for fifty years advocated the great importance of industrial and vocational education makes it unnecessary for this institution to essentially change its curriculum. Since 1893 Stout has been training teachers of vocational, industrial, and home economics education. That has been Stout's particular job during these years, and it has continued to be the only college in America limiting its educational program to that field.

The catalog for 1944-45 goes out this year carrying significant changes from the catalogs of preceding years. The courses of instruction are modified to meet new demands in the schools to which Stout graduates go. Program changes are made to meet emergency defense demands in the preparation of Stout students for earlier service to the nation in any of the several fields for which they are prepared here at Stout.

But this thought should maintain in the minds of the people who are considering college attendance—Stout is training teachers of vocational, industrial and home economics education, and hopes to continue to do superior work in these lines in which it has been outstanding.

The best possible training for national defense during these months or years must be related directly or indirectly to national defense. The maintenance of American institutions, American liberties and ideals must come first in the preparation of courses of instruction and the programing of laboratory and shop classes in all institutions of higher learning. These thoughts persist in the shaping of college courses today.

In these critical times, whether only one, two or three years of work here is possible, the student and the nation will benefit accordingly. When the need of the nation is no longer urgent, the college work here at Stout can be finished without loss, and the further preparation for life's work completed.

These statements apply to both men and women—

A Change in Program

is made to make possible a shortening of the period of preparation. The regular calendar has been prepared to outline the regular work of the college. This supplement is prepared to announce the program changes thought to be desirable in national defense.

Two significant changes are made. The first change in the program makes it possible for a student to enter college in the summer session in the summer of 1944 and take the college degree at the close of the summer session in 1947. Under this provision, the four-year college year can be shortened to three years. Graduates will be badly needed then. During the summer and fall of 1941, Stout had calls for four or five

teachers to each one graduated. That ratio will increase as these war years pass, and the remuneration will increase under a normal financial status.

The Period Required for Graduation

is shortened by the extension of the summer session from six weeks to nine weeks. The 1944 Summer Session of nine weeks begins June 19. It closes August 18, just three weeks before the opening of the Regular Fall Session on September 11. Summer session work may be taken on the three, six, or nine-week basis.

Another Important Change in Policy

is made in this announcement. This year, for the first time in fifteen years, Stout is encouraging the entry of beginning students with the opening of the summer session. Previously the summer session work has been prepared more particularly for the older experienced students and teachers. The necessity for preparing teachers and trainers in industry in the briefest period possible has prompted the administration to hold teachers in service and prepare the courses to meet the needs of younger students.

It should hardly be necessary to make the perfectly logical statement that only mentally capable, physically strong students, capable of maintaining a reasonably regular work program should undertake the intensive program proposed. We think, however, that more than one-half the students who enter Stout are prepared to successfully finish the regular four year course in three years.

Any changes that are incorporated here seem to be demanded in the interest of national defense, to which every teacher and every student in America will want to give every support.

The regular catalog gives all other information.

GENERAL INFORMATION

HISTORY

With the creation of Wisconsin as a state in 1848, there came prompt recognition of the educational needs of the new commonwealth. Immediately, by the creation of its first state normal school, Wisconsin provided for teacher training. While Massachusetts and Pennsylvania preceded Wisconsin in the organization of normal schools, the records show that in 1867 Wisconsin was leading even these states and all other states in the number of state normal schools established. In that year, Wisconsin was operating five state normal schools, one more than existed in any other state. Wisconsin demonstrated its leadership again when in 1911 it provided a teacher training school charged with the preparation of teachers of Home Economics and Industrial Arts. In that year, after eighteen years of operation as a privately endowed training school, The Stout Institute became a state institution.

The Stout Institute pioneered in placing instruction in industrial arts and household arts in a system of public schools. Menomonie was the first city in America in which manual training and domestic science were made a part of the course in all grades of the public schools and high school. This training was under the supervision and instruction of The Stout Institute.

During the early experimental years, these schools were constantly visited and inspected by educators from the east, west, north, and south. The manual and household arts began to find their way into other school systems. Teachers had to be supplied. The Stout Institute alone at that time was ready to furnish them. It was then, in reply to a general demand, that The Stout Institute became a teacher training college, the first in America to dedicate itself wholly to the preparation of teachers of industrial arts and household arts. It is still the only—as it was the first—college in this country dedicating its efforts wholly to that purpose.

Indirectly, The Stout Institute owes its existence in Menomonie to the lumbering interest which, in 1889, brought James H. Stout to northwestern Wisconsin. Here Mr. Stout amassed a considerable fortune as one of the partners of the Knapp, Stout and Company, long recognized as one of the major lumbering companies of the northwest.

It was James H. Stout who had the vision and conceived the purpose and plan of organization of The Stout Institute. His success in the lumber industry made it possible for him at least partially to realize his dream before death interrupted his work and cut short a program which would have changed completely the future of the school, and would, without doubt, have left the school amply endowed.

The first building erected contained just two rooms, one given to manual training and the other to domestic economy, as homemaking work was then termed. The work immediately proved to be so popular that Mr. Stout erected, in 1893, a large building, costing in that day of extremely cheap construction $100,000 and equipped it completely for carrying forward many lines of handiwork. After this building had served its purpose for only four years, it was destroyed by fire. During the school year 1898-1899, a larger and better building was erected by Mr. Stout as a monument to his faith in the cause he espoused.

Prior to 1903, Mr. Stout's efforts were dedicated to the boys and girls of Menomonie, and all shop and laboratory work was carried forward under the administration of the public schools. In 1903, however, the character of the school was greatly changed and broadened in scope by the organization of The Stout Training School, and the dedication of its efforts to the training of teachers of manual and household arts.

At that time Lorenzo Dow Harvey, State Superintendent of Public Instruction, nationally recognized as an educational leader, was made Superintendent of Schools of Menomonie and President of The Stout Training School. Here began the development of new ideals in education and the breaking down of old practices.

Early in 1908 another important change came: through articles of incorporation, The Stout Training School became The Stout Institute. The purposes enumerated in its charter insured the development of a greater school.

In 1911, The Stout Institute became a state school. Since that date, it has been administered by the Board of Trustees of The Stout Institute. Under these conditions, the school assumed new obligations, among which was to produce a sufficient supply of competent teachers of home economics and industrial education to meet the needs of the state. The Stout Institute was still a junior college. The demand for Stout Institute graduates increased so rapidly that a further extension of courses became imperative.

The larger high schools began to demand teachers with four years of college training and a college degree. In recognition of that fact the legislature, in 1917, extended the course to four years and authorized The Stout Institute to grant degrees.

Inspired by insistent demands on the part of graduates of The Stout Institute, with the approval of the Board of Trustees, the administration prevailed upon the legislature of 1935 to authorize the granting of graduate degrees. The enrollment for this work during these years has indicated the desirability of this new program. The degree of Master of Science in industrial education, vocational education and home economics education is now being issued in increasing numbers.

While the greater part of the students come from Wisconsin, almost every state in the country is represented in the year's enrollment at The Stout Institute. Stout graduates are teaching in every state in the Union. They are teaching in Canada, the Canal Zone, Hawaii, Cuba, and

the West Indies. The Stout Institute strives not for enrollment, but superior accomplishment.

COLLEGE ASSOCIATION AFFILIATIONS

Soon after The Stout Institute restricted its work to a four-year curriculum, it was accepted by the North Central Association as a member of the teachers college group and two years later was taken into full college membership. Since the formation of the American Association of Teachers Colleges, The Stout Institute has maintained membership in that organization. The college is also a member of the American Council on Education.

BUILDINGS AND GROUNDS

Four large, thoroughly equipped buildings (the Home Economics Building, the Industrial Education Building, the Gymnasium, and the Trades Building) comprise the central plant. In addition there are three dormitories, a home management house, and an infirmary.

The grounds include spacious lawns for the women's dormitories, a practice field, tennis courts, and the Burton E. Nelson Athletic Field. During the fall of 1935, a shelter house was constructed, which includes dressing rooms and shower rooms for two teams. The administration plans for the immediate future include the construction of a new field house, the site for which the state recently purchased, and a new library building.

The need for these two structures has this year been recognized by the Legislative Interim Committee in its report to the legislature in January of this year. Following the report of the committee, the legislature promptly passed the bill providing for the construction of these two buildings as a part of a postwar building program of the state. Preliminary plans for these two buildings are now in preparation in the office of the State Architect.

The Library

The Library is at this time housed in the Home Economics Building. It provides a wide range of reference material, particularly on home economics and industrial and vocational education, but is also rich in fields of art, the social and natural sciences, economics, history and government, mathematics and engineering, manufacturing and industry. A large number of books and magazines for purely cultural reading is provided.

Laboratories and Equipment

The shops for the teaching of industrial subjects are all well equipped and kept up-to-date. The Trades Building is devoted exclusively to shops containing all needful equipment for elementary and advanced classes in carpentry, cabinetmaking, general woodworking, auto mechanics, sheet metal, painting and finishing, architectural and machine drafting, and visual education. A modern industrial mechanics shop has just been added. It has provision for use of all types of visual education equipment. The Industrial Education Building contains shops completely equipped for work in general mechanics, foundry, printing, general metal, electric work, and machine practice. A physics laboratory and shops for practice teaching are also housed here. Necessary lecture rooms for general subjects are provided throughout the building.

The laboratories for home economics instruction are among the best in the country. All located in the large home economics and adminis-

tration building, they include units for textiles and arts, nutrition and foods, nursery school, homemaking, and sciences. Lecture and demonstration rooms are comfortable and commodious. Throughout, the equipment is up-to-date and adequate for all levels of work.

Auditorium

One of the wings of the Home Economics Building houses a large, modern auditorium with a seating capacity of 800. At least once each week an attractive program of an educational or entertainment nature is presented by nationally known speakers or entertainers. The large stage makes possible the appearance of large musical organizations, local and traveling, and provides excellent facilities for work in dramatics.

Dormitories for Women

Bertha Tainter Hall is furnished with all modern conveniences, and is well-lighted, heated, and ventilated. This building was thoroughly remodeled recently, and the interior was completely modernized, redecorated, and largely refurnished.

Tainter Annex adjoining it has been remodeled, and modernized throughout. More light and room space are provided. Old bathrooms were removed and new bathrooms installed. Another living room and a sun room were added. The gray stucco on the outside has been replaced by fireproof asbestos shingles which add greatly to the appearance of the building and materially reduce fire hazard.

The Mary Eichelberger Hall is a construction of an imposing stone mansion built in 1890 by the Tainter family and later occupied by the Wilson family, two of the four families identified with the Knapp, Stout and Company referred to in the Historical Sketch of Stout in this catalog.

It has been named Eichelberger Hall because the building was paid for out of a $20,000 legacy provided in the will of Mrs. Mary Eichelberger of Horicon, Wisconsin. The entire building, basement and three floors, is now being completely reconstructed. New walls, floors, plumbing, heating, lighting and furnishing, as well as a new roof, over insulation, were indicated and that work is now in progress.

This dormitory for women is on the same campus, bordering Lake Menomin, with Tainter Hall and the Annex. It has been planned to take care of twenty-four to thirty women. The room charge here is $80.00 per year.

All nonresident freshman and sophomore women are required to live in the dormitories. All junior and senior women under twenty-five years of age are also expected to live in the dormitories, when accommodations are available.

Dormitory for Men

Lynwood Hall was built for the purpose for which it is used and is in every appointment adequate and complete.

Recently elaborate improvements have been made. These include the enlargement of living and recreational rooms, sound proofing the building, installation of new bath and toilet facilities. Exterior improvements add materially to the appearance and attractiveness of the building.

Nonresident freshman and sophomore men are required to room at Lynwood Hall. Nonresident freshman men are required to take their meals in the Stout Cafeteria. No exception is made to this requirement.

Concerning all Dormitories

Room rent in dormitories is payable by semesters, in advance at the beginning of each semester. Board is payable four weeks in advance.

The charge for a room for each student for the school year of thirty-six weeks is $80.00 to $90.00, according to size and location of the room. These prices apply to all dormitories.

In Tainter Hall and Annex, the charge for meals and a definite amount of laundry work for each student is $5.75 per week. A laundry in connection with the women's dormitories provides service to students in those dormitories at a minimum charge. All Stout dining rooms are under the direct supervision of trained dietitians. Balanced meals are carefully planned with the thought in mind that the health of the students is of primary importance.

Rooms in dormitories will be available Sunday, September 10, 1944. Meals will be served beginning Monday noon, September 11, 1944.

All first year entrants and all transfer students must fill out an application form for a room and send it as early as possible to the Director of Dormitories at Tainter Hall. The necessary form is one of the several forms included in the enrollment papers.

All rooms are assigned for the entire academic year. Each room is furnished with two single beds, with mattresses and pillows for same, dresser, study table, chairs, bookcases, and rug. Sheets, pillowcases, and laundering of same are also supplied. The student must supply dresser scarf, couch cover, waste paper basket, towels, blankets or comfortables, and simple curtains which should be arranged for with roommate after assignment of room has been made.

Students are requested not to bring additional furniture, particularly floor lamps. A practical study lamp for the table, with rubber insulated cord and plug is permissible and desirable. All such lamps will have to be inspected by the school electrician before they are used. Radios are not permitted in students' rooms. A community radio is supplied.

The Infirmary

The Stout Institute maintains an Infirmary for the care of students, where every detail of health is carefully supervised. A resident registered nurse supervises the health of students throughout the college and is on duty at the infirmary. The nurse maintains regular office hours in her rooms in the Home Economics Building, where she can be consulted by students. A college physician is available for consultations. Students are given a medical examination annually.

A Student Health fee of two dollars and fifty cents per semester is paid by all students. This fee insures dispensary service, physical examinations and three days of hospital care without charge. After the third day a charge of one dollar a day will be made for meals. Students rooming in dormitories where meals are served will not be charged for meals while at the infirmary.

Any student who is too ill to attend classes should report at once to the school nurse. Students living in Menomonie shall have their parents or guardian notify the school nurse. Cases of severe illness or other serious situations that will enforce prolonged absence should be reported to the Dean of Home Economics or the Dean of Industrial Education.

Home Management House

A thoroughly modern and fully equipped Home Management House has replaced the old frame building which stood on the same site for

more than sixty years. This new Home Management House is a brick veneer building, of ample size, containing all conveniences and accommodations needed in such a building. Recreation room, store room, and laundry are found in the basement. A large living room, dining room, kitchen, and director's living quarters are on the first floor. On the second floor are large, comfortable, well-lighted student rooms. The building is heated by an oil burning furnace, and the air is conditioned for moisture and temperature by modern apparatus.

The Tea Room

The Stout Tea Room is used chiefly as a laboratory for the class in applied institution management. During the period given to instruction in institution management, attractive, well balanced, inexpensive meals are served under the direction of the director of institution management. On these occasions, the Tea Room is open to students, faculty and their friends.

Special conference or social groups wishing to eat in the Tea Room may secure their food in the Cafeteria just across the hall and take it to the Tea Room. Advance notice must be given the management so that necessary arrangements can be made and to avoid possible conflicts through duplication.

The Cafeteria

The Stout Cafeteria, located in the east end of the Home Economics Building, is used by students, faculty, and their friends. The dining room is modern and colorful. Meals are served daily except Sunday. The food is excellent and inexpensive. Students can obtain adequate meals at from $4.00 to $5.00 per week. The complete cafeteria service is under the direction of the Director of Institution Management. Special groups may obtain reservations for meals from the Director. All nonresident freshman men are required to eat their meals in the Cafeteria, using meal tickets provided as a means of checking attendance. For the school year 1944-45 the Cafeteria will open on Monday noon, September 11, 1944.

Students who do not wish to meet all residence requirements should not apply for admission.

Other Living Facilities

Accommodations for men and women not living in dormitories may be procured in the city at varying rates, depending upon location and quality of service. Rooms may be had as low as $2.00 per week per person, and table board may be obtained in private homes at $5.00 to $6.00.

ADMISSION TO COLLEGE

Students may enter at the beginning of either semester or the summer session.

Admission to the college may be secured:

1. By presenting a certificate of graduation from an accredited high school.
2. By submitting evidence of studies successfully pursued in another institution of higher learning.
3. By qualifying as an adult special student.

Prospective students may learn at any time of year by corresponding with the Registrar whether or not they have the necessary qualifications for admission and upon what basis they may be admitted. Students may

enter the Stout Institute at the opening of either semester or of the summer session, but all credentials should be filed sufficiently in advance of the date chosen to permit the Registrar to pass upon them and to issue the proper letter of admission. Candidates for admission in September should have their credentials filed with the Registrar by the first of August. The credentials must in every case include a complete record of all previous secondary school and advanced work.

Persons who plan to enter Stout should fill out and file application for enrollment as early as possible. Blanks will be furnished promptly on request. This enrollment blank, together with the health certificate, when filled out must be forwarded to the President before the beginning of the semester. It should be forwarded early since the number admitted to beginning classes is limited. Late registration is discouraged. All students are expected to register on general registration days.

Entrance Requirements

Entrance requirements of The Stout Institute shall be interpreted as graduation from an approved high school or equivalent training. Not less than 15 units shall be accepted.

1. The following units shall be required of all:
   English ..... 3 units
   Mathematics ..... 1 unit
2. Two units are to be presented from one of the following:
   Foreign Language, History, Social Science, Science.
3. In addition to the units required under 1 and 2, a sufficient number of units to make a total of fifteen must be offered from Groups A and B. Not more than 5 units may be offered from Group B.

Group A	Group B
English and Speech	Agriculture
Foreign Language	Commercial Subjects
History and Social Science	Home Economics
Mathematics	Industrial Arts
Science	Mechanical Drawing
Advanced Applied Music and Art	Optional (2 units)

4. A high school graduate need not meet the above requirements if he is recommended by his high school principal and if he stands in the upper one-half of his class. But it is required that wherever mathematics is a prerequisite for successful work in a course, the high school deficiency must be made up if it exists, and for this the college will not hold itself responsible for providing facilities.

All first year entrants and all transfer students are required to take Freshman Examinations which are given during Registration Week. A two dollar fine will be imposed upon those who take the examinations at other than the scheduled time.

A supplementary physical examination is made of all first year students and an annual examination of all students is required. The examination is made by the college physician. The charge for this examination is included in the infirmary fee referred to elsewhere. These credentials, together with an approved statement of rooming arrangements, are required before the enrollment is considered complete.

Mature students who are deficient in entrance credentials may take entrance credential examinations while in attendance.

Transferred Credits

Students entering The Stout Institute who have had any work whatsoever in another institution of higher learning, regardless of whether or not they wish to receive credit for it, must submit complete credentials of both their high school and college work. All such transcripts and supplementary material should be sent at least six weeks preceding the opening of the session the student desires to enter.

Students whose transcripts of advanced standing show an average below C may be accepted on probation.

Graduate students who hold Bachelor's degrees from other institutions must spend one year in residence and meet the minimum requirements of their major in order to obtain the degree of Bachelor of Science from Stout.

A maximum of eight semester hours of modern foreign languages will be allowed as elective credit with a minimum of not less than four semester hours in one language.

Sixteen semester hours of approved courses done through extension or correspondence, not more than five semester hours of which shall be correspondence credit, shall be the limit accepted by The Stout Institute for graduation requirements.

SPECIAL STUDENTS

All students taking work for credit toward degrees are regular students. The Administration urges very strongly that all students enter regular courses and take the work outlined for those courses, even though they may not be able to stay on for the time required to complete them. Students are given special classification only when their age and preparation, in the opinion of the President, make such classification expedient and justifiable.

CREDITS, GRADE POINTS, AND ATTENDANCE

In order to receive a degree, the student not only must gain the required number of credits in the course which he is pursuing, but also must attain a certain standard of scholarship. This standard is fixed by the grade point system, which requires for graduation as many grade points as credits. Grade points are apportioned as follows:

A	(94-100)	3 grade points per semester hour credit.
B	(86-93)	2 grade points per semester hour credit.
C	(78-85)	1 grade point per semester hour credit.
D	(70-77)	0 grade point per semester hour credit.

The maximum number of grade points that can be earned by a student graduating with 124 credits is 372; the minimum is 124. Students who graduate under the 128-hour curriculum must earn 128 grade points. It is evident that an average grade of C is necessary for graduation. Students who fall behind in the required number of points are ineligible for graduation.

In determining grade points for two-year diploma graduates of The Stout Institute who reentered after September, 1927, only such credits as are earned after that date are used in computing the number of grade points for such students. When computing grade points for students who enter with advanced credits, only those credits which are earned in The Stout Institute after September, 1927, are used in computation. In order to qualify for a degree, such transferred students must receive

as many grade points as the number of semester hours required for obtaining the degree.

"Incompletes" are given only in cases in which the absence incurred has been due to situations over which neither the teacher nor student has any control. To secure an Incomplete, a student must have a passing grade in the course at the time of withdrawal.

Residence Requirements

The minimum residence requirement is thirty-two semester hours and thirty-two grade points to be earned in at least thirty-six weeks of attendance at Stout Institute. The last year of credit must be earned in residence at The Stout Institute.

Degrees

The Bachelor of Science degree is conferred upon all students completing curriculum requirements in the Division of Home Economics and in the Division of Industrial Education. These courses require four years of work beyond the high school. Upon completion of this work a diploma is issued, which by statute is made the basis for a life certificate after two years of successful teaching in Wisconsin. This life certificate legally qualifies the holder to teach in the public schools of the state the subjects in which he has taken training. The license is issued by the Wisconsin State Department of Public Instruction.

Fully registered students at The Stout Institute, in the Division of Home Economics, must complete one hundred and twenty-four semester hours and earn one hundred and twenty-four grade points, plus the requirements in physical education. Students in the Division of Industrial Education must complete one hundred and twenty-eight semester hours and earn one hundred and twenty-eight grade points, plus the requirements in physical education.

EXPENSE ESTIMATES

Estimates on Usual Expenses Incurred by a Student for a Regular Session of Thirty-Six Weeks

Fee for Library, Physical Education, Laboratories and Shops (Semester $20.00)	$ 40.00
Room Average Dormitory Rate (Semester $40.00)	80.00
Board—Dormitory Dining Room or Cafeteria	198.00
Laundry (College or City)	25.00
S.S.A. Membership (Semester $6.25)	12.50
Material for Classes (average)	25.00
	$380.50
Tuition for Wisconsin Residents (waived temporarily)	00.00
Tuition for Nonresidents (Semester $62.00)	124.00
Estimated Expenses for Residents	380.50
Estimated Expenses for Nonresidents	504.50

The fact that incidental expenses, amusements, traveling expenses, postage, clothing, personal supplies, etc. are not included in the above must be taken into consideration.

Due to the uncertainty in cost ranges it may be necessary to change the above estimates from semester to semester.

Transfer of Records

Students wishing to transfer from The Stout Institute to another institution should request the Registrar to send a transcript of record

and letter of dismissal, giving notice of at least one week. Three transcripts of record are furnished each student without charge; a fee of one dollar is charged for three additional transcripts. This fee must be sent with the request.

Tuition, Regular Session

No tuition charge for residents of Wisconsin is being imposed this year. The tuition charge for nonresidents and the definition of nonresidents are covered in the following quotation from the Wisconsin Statutes:

"Any student attending The Stout Institute who shall not have been a resident of the state for one year next preceding his first admission thereto shall pay a tuition fee of one hundred twenty-four dollars for the school year and a proportionate amount for attendance at the summer session."

Tuition is payable in advance each semester.

Shop and Laboratory Fees

Fees charged for shop and laboratory courses are included in the $20.00 semester fee referred to above. In addition to the shop and laboratory fees, students are required to pay for any breakage or damage to buildings for which they are responsible. Fees are payable registration day at the beginning of each semester and summer session. The fee receipt is to be retained by the student to gain admittance to classes. A charge is made for duplicate receipts.

Library Fees

A library fee of $4.50 per semester formerly charged as a separate fee is now included in the $20.00 General Fee charge made to all students. For this fee all necessary textbooks are furnished from the loan textbook library without any extra charge to students. The reference library is supplied with standard books needed to supplement textbooks in different subjects.

The reading room is supplied with daily and weekly newspapers, educational, literary, and technical periodicals, adapted to the needs of the students and available for their use.

In addition to The Stout Institute library, students have access to the Memorial Free Library, one block from The Stout Institute main buildings. The combined facilities of the two libraries make available 32,000 volumes, exclusive of public documents.

Incidental Fees

Special Examination Fee (taken in special cases only) $2.00
Fees for Transcripts. A student is entitled to three transcripts of his credits. Three additional copies are issued at the rate of..... 1.00
Lock Deposit $1.00—Refund ..... .75

STUDENT LOANS

In 1921, Mrs. Mary J. Eichelberger of Horicon, Wisconsin, willed to The Stout Institute twenty thousand dollars in preferred stocks and cash. This legacy came to the institution without stipulation as to the purpose or use to which it was to be put. For several years no use was made of this fund.

In 1942 the Administration recommended that the earnings from the principal and such part of the principal as might be necessary should be used in making loans to worthy and capable students when in need.

No part of the principal has been used. The fund has, through dividends and interest additions, increased to a considerable sum. Ten thousand dollars is now being used by students in attendance or is being repaid by students who have graduated.

Certain requirements are set up to govern the committee in passing upon applications for loans. There must be evidence of real need. Freshmen are not accorded the use of this money. Loans are made only to students of good moral character, high scholarship, and excellent promise as teachers.

SELF-SUPPORT AND STUDENT AID

While there are opportunities for a student attending Stout to earn a part of his expenses, it should be borne in mind that the courses are designed to require the whole of his time and effort and that the amount of outside work he will be able to do cannot be great. For this reason students whose funds are insufficient to meet their expenses for at least the first year, are not encouraged to enter college. Students working to earn part of their expenses are expected to carry a reduced program.

As far as possible, students are employed for extra work about the library, laboratories, and in the cafeteria, and as janitors. Some opportunities offer themselves outside of school agencies. A great deal depends, of course, upon the ability and energy of the individual, and his willingness to do any kind of work. The best places are usually obtained by those who have been in college for some time.

Stout does not guarantee employment. It does, however, make a special effort through its college employment bureau to locate students needing work as a means of paying expenses.

The school operates a Student Loan Fund and makes available to needy and deserving students aid within the limits of the fund. Loans are not made, however, to freshmen students and are made only to those students whose school records recommend them to the Committee on Student Loans. Money from this fund is loaned at five per cent, and the loans are made returnable at the latest within one year after the student leaves school.

FEE FOR SCHOOL ACTIVITIES

The Stout Institute offers a wide range of student activities. Besides the regular classes in physical education for men and women, Stout is represented each year by strong football, basketball, baseball, and track teams. Glee clubs, one for the men and one for the women, have been maintained for a number of years. The Symphonic Singers, an A Cappello choir as well as a band and an orchestra add greatly to the life of the school. All musical organizations are under the supervision of a trained and capable director. Dramatics is centered in the organization known as the Manual Arts Players. A permanent Lyceum committee is maintained, operating each year a five and six number course of the very best talent available. Weekly assemblies bring to the students many excellent lectures, entertainers, musicians, artists and musical organizations of outstanding ability. The college paper, The Stoutonia, is published each Friday. The Tower, the college yearbook, is also a product of student activities at Stout. Numerous social affairs take place throughout the year in the school gymnasium.

All of these organizations through contests, concerts, plays, programs, contribute to the social life of the school. The management of admission, booking, and relationship with various student activities is through the

Stout Student Association, the officers of which are elected each spring at a regular all-school election.

The membership charge, $12.50 per year, is payable by all students, $6.25 at the beginning of each semester. This membership gives every student of the college admission to all athletic events including football, basketball, and baseball, all concerts by student musical organizations including the Band, Orchestra, Men's Glee Club, and Women's Glee Club, productions of the Manual Arts Players, all lyceum and assembly programs and other entertainments under the supervision of the student association, educational and other lectures, all student dances given under the auspices of the student association, and the subscription to the student weekly newspaper, The Stoutonia, and the Tower, the college annual. The Stout Student Association membership has eliminated the necesssity for the many former student drives for the financial support of the usual college activities. The only exceptions are the religious and social organizations. The association has added much to the social atmosphere of the school and has systematized and made harmonious all school activities.

REFUNDS

Students who are compelled to withdraw from the college by reason of illness, not due to poor physical conditions or ill health existing before entering, are entitled to a refund of tuition from the date when notice of such withdrawal is received to the end of the semester.

Students boarding in the dormitories are also entitled to a refund of whatever amount has been advanced for board beyond the date when notice of withdrawal is received.

Refund for advance payment of room rent in the dormitories is allowed from the date when the room is again rented. Effort is made to get an occupant at the earliest date possible.

As books and supplies for which fees are charged have to be bought in advance in quantities necessary to supply the entire enrollment, no refund of fees is made in any case.

REGULAR SESSION ENROLLING

The 1944-45 school year opens Monday, September 11, 1944, the first semester closing January 26, 1945. The second semester opens January 29, 1945 and closes June 1, 1945.

SUMMER SESSION 1944

The thirty-ninth annual summer session of The Stout Institute will be held during the summer of 1944, opening June 19th. The accelerated program will be continued, opportunities for summer session work being available for nine weeks. Courses will be available on both the six and three week basis. Many units of work will be on the three week basis to make it possible for students to arrange a variety of combinations to meet the many new current and post war problems. The summer session bulletin issued in April gives full information on the courses and schedules.

Summer session classes are designed to meet the needs of various groups of people. Former students and graduates have an excellent opportunity for taking advanced work. Both graduate and undergraduate work will be offered. Members of the armed services personnel returning to civilian life will find the very flexible summer session schedule helpful

in resuming professional training. Supervisors and teachers of industrial education or home economics can strengthen their work in techniques or in the field of education. All persons interested in specific studies related to work in industrial or home making courses will find much of interest in the summer session schedule. The Wisconsin State Board of Vocational and Adult Education through the use of federal teacher training funds is cooperating with The Stout Institute in the preparation of teachers for schools of vocational and adult education. The summer session schedule carries a strong range of courses required for vocational classification.

Refresher courses are available for teachers who have been granted emergency licenses, for teachers returning to teaching, for teachers meeting new responsibilities in added fields of work, for men and women with practical experience desiring intensive training, and for men and women preparing for special training courses developed during the war emergency. Educational workshops will be continued. These will afford opportunity for individual and group work. Practical solutions of current problems will be planned in terms of immediate requirements and post war adaptations and developments.

High school graduates may begin their regular work at the beginning of the summer session. Through the use of nine weeks sunmmer sessions high school graduates are able to complete the four year curriculum in three calendar years. Special provisions are made in the summer session for high school graduates who desire to utilize college opportunities for preparation for the various war production services and for the armed services. Young men may make full use of their time before induction. Young women may make use of the accelerated program of college work leading to professional employment opportunities.

Special lectures and conferences are included in the summer session program. It has been the policy of the college to secure special speakers particularly well qualified to handle the larger social problems of the present time. Special emphasis is given to the relationships and responsibilities which home economics and industrial education teachers have in the solution of these problems.

Credit granted for courses taken during the summer session will apply on course requirements where such courses are in the curriculum leading to the degree. The time assigned to courses in the summer session is adjusted to the three week, six week, and nine week plans of operation. Teachers whose work remaining for the degree is in an amount too large to be conveniently completed through summer sessions are advised to use one or two semesters of attendance in addition to summer session attendance. In the preparation of the summer program certain courses are offered every summer while others are alternated. Students planning to attend several summer sessions should consult advisors at the time of registration. Opportunity is offered in various courses to meet the rapidly changing requirements in teaching positions.

During the last several summer sessions there has been a very marked trend toward the use of the summer session as an extension opportunity for teachers in service. In the 1944 summer session flexibility in the combinations of courses will not be planned to meet the varying needs on the part of teachers as they meet the new responsibilities of the present times.

The April issue of The Stout Institute bulletin is the annual summer session bulletin. This contains general information on the summer session, descriptions of courses, and the summer session class schedule

including both undergraduate and graduate work. It will be sent on request.

GRADUATE PROGRAM

The Wisconsin Legislature of 1935 granted The Stout Institute the authority to inaugurate a fifth year of work, on the graduate basis, leading to the degree of Master of Science, with majors in home economics education and industrial education. In 1939 additional legislation made provision for undergraduate and graduate majors in vocational education. The initial offering of graduate work was made in the 1935 summer session. For the present, the graduate work is offered in the summer session only. The summer session bulletin, issued each year in April, carries detailed information on courses available on both the undergraduate and graduate levels the following summer.

General Plan

The individual graduate student will work with his adviser in his major field in a formulation of a tentative distribution of work. The approval of the adviser and of the graduate committee will be necessary. Thirty semester hours of work will constitute the credit requirements. The individual student's plan for his work will be arranged tentatively during the first summer session in which the student attends on a graduate basis. Work for the Master's degree must be completed within six years. Requests for extensions will be given consideration by the committee. The minimum length of time spent for graduate work shall be one year. Not more than six semester hours of credit may be transferred from other institutions.

Admission

Students who hold the degree of Bachelor of Science from the Stout Institute, or its equivalent, may take graduate courses. Important considerations of the graduate committee in granting approval on admission applications will be: The applicant's having earned an approximate grade point average of 1.5 as an undergraduate; the applicant's having satisfactory practical or teaching experience. Students whose candidacy has not been clearly established will be accepted on probation. Credit toward the Master's degree will not apply until the student has been accepted as a candidate for the degree. Students whose undergraduate work was not taken at The Stout Institute should have their transcripts sent to the Registrar not less than one month prior to the opening of the summer session.

The work leading to the Master's degree is available in majors in home economics education, industrial education, and vocational education. For those who wish to become candidates for the degree of Master of Science with a major in Vocational Education, eligibility will be based upon a Bachelor's degree from an accredited college plus at least one year or equivalent of full-time, successful, certified vocational teaching experience.

Fees

All undergraduate and graduate students pay a Library Fee of $2.00 and an Activities Fee of $2.00. These fees are paid once during the summer session. The tuition fee for nonresidents of Wisconsin, graduate or undergraduate, is at the rate of $10.50 for each three week period of summer session attendance. Graduate students, both residents of Wisconsin and nonresidents, pay graduate tuition at the rate of $10.00 for each three week period of attendance. Fees for materials in certain courses are itemized in the summer session bulletin. These fees are kept at a minimum and cover the cost of material used.

Distribution of Courses in Graduate Sequence

Courses available for graduate work are classified in three groups. It is planned to expand the range of offerings in each group in successive summer sessions. Special graduate conference schedules are maintained each summer to give graduate students specific aid in planning their sequences and selecting courses.

The professional objectives of the individual student and the general requirements for graduate work will be included in the considerations used as a basis in defining the ultimate program. In the arrangement of graduate courses in the three groups, the general purpose is as follows:

Group I

Minimum requirement—four to six hours. (Four semester hours if any in this group have been taken as undergraduate credit.) Includes basic professional courses.

Group II

Minimum requirement—six semester hours selected from this group or courses remaining in Group I. Primarily an elective group with selections determined by the student's general and professional interests.

Group III

Minimum requirement—fifteen semester hours.

Is for the purpose of developing sequences of concentration in the direction of the professional advance of the individual student. Selections of courses to develop sequences in this group will consider the individual's professional progress to date, present location, and expanding responsibilities. As the plan of concentration in this group is developed through conferences, it will constitute a significant control in the selection of the investigation title.

The maximum credit allowed for the investigation will be six semester hours. The approval of the investigation selection will be made with the guidance and approval of the graduate committee and the dean of the division in which the student is majoring.

Credit requirements by groups are indicated in minimums. The maximum credit taken in each group will be determined by the fields of emphasis and concentration in the individual student's plan. The opportunities available in the graduate program are arranged in the following tabulation according to Groups I, II, and III. Courses usually available on the three-week short unit basis are identified by (3 wks.) Some courses are offered every summer, and others, both six-week and short units are alternated. The particular graduate courses offered in the 1944 summer session are indicated in the graduate schedule of classes included in the summer session bulletin. Courses numbered 500 or above are available for graduate credit only. Other courses on the following list are available for graduate credit and for senior undergraduate credit.

GROUP I—BASIC COURSES

Course		Credit
Ed 304	Vocational and Adult Education (formerly The Part Time School)	2
Ed 401	Vocational Guidance	2

Ed 461	Statistics	2
Ed 500	Philosophy of Education	2
Ed 501	Research Procedures	2

GROUP II—ELECTIVES

Course		Credit
Ed 360	Visual Education	2
Ed 405	History of Education	2
Ed 472s	Coordination in Voc. Ed. (3 wks.)	1½
Ed 417s	Consumer Education (3 wks.)	1½
Ed 474s	Adult Education in Vocational Ed. (3 wks.)	1½
Ed 476s	Survey Procedures (3 wks.)	1½
Ed 478s	Supervision of Voc. and Adult Ed. (3 wks.)	1½
Ed 462s	Sel. and Organization of Related Mat. (3 wks.)	1½
Ed 464s	Rural and Part-Time Education (3 wks.)	1½
Ed 466s	Problems in Rural Living (3 wks.)	1½
Ed 470s	Conference Leadership (3 wks.)	1½
Ed 442s	Counseling Sec. School Level (3 wks.)	1½
Ed 535	Administration and Organization of Sec. Ed.	2
Ed 473s	Adm. of Voc. and Adult Education (3 wks.)	1½
Ed 453s	Financial Org. and Mgt. in Voc. Ed. (3 wks.)	1½
Ed 454s	Personnel Rel. in Voc. Ed. (3 wks.)	1½
Ed 477s	Circuit Teaching Programs (3 wks.)	1½
Ed 423a	Safety Education (3 wks.)	1½
Ed 423b	Problems in Safety Education (3 wks.)	1½
Ed 419s	Distributive Occupations (3 wks.)	1½
Ed 418s	Apprentice Training (3 wks.)	1½
Ed 467s	Character Education (3 wks.)	1½
Ed 482s	Adolescent Problems in Education (3 wks.)	1½
Ed 483s	Contemporary Education (3 wks.)	1½
Ed 484s	Community Analysis (3 wks.)	1½
Ed 485s	The Community in Education (3 wks.)	1½
Ed 487	Civilian Defense Leadership in Voc. Schools (3 wks.)	1½
Ed 486	Education for Democracy (3 wks.)	1½
Ed 444	Extra-Curricular Activities	2
Ed 350	Adolescent Psychology	2
Ed 420	Psychology of Adult Learning	2
Ed 446	Psychology of Industrial Personnel	2
SS 400	Latin American Peoples and Governments	2
SS 421	Current Housing Problems	2
SS 451	Europe Since 1914	2-3
SS 215	Origins and History of World War II	2-3
Art 406	Creative Arts	2
Ed 447	Psychology of Personality and Mental Hygiene	2
Ed 449	Psychology of Counseling and Guidance	2
SS 461	Contemporary Civilization	3
SS 417	American Politics	2
SS 409	Recent History of U. S.	3
SS 412s	Sociology and Education	2-3
SS 505	Personnel Management	2
Eng 402	Fiction	2
Eng 404	Poetry	2
Eng 406	Drama	2
Bact 422s	Applications of Bacteriology	3
Biol 432	Heredity and Eugenics	2
Biol 362	Advanced Physiology	3

Biol 442	Community Hygiene	2-3
Chem 426	Textile Chemistry	3

GROUP III—HOME ECONOMICS

Course		Credit
Ed 413	Teaching Homemaking in Voc. and Adult Education	2
Ed 416	Problems in Teaching Homemaking in Voc. and Adult Ed.	2
Ed 425	Home Economics in Wisconsin Schools	2-3
Ed 508	Curriculum Studies in Home Economics	2-4
Ed 520	Current Prob. in Teaching Home Economics	2
Ed 451	Measurements in Home Economics	2
Ed 411	Supervision of Home Economics Education	2
Ed 474	Homemaking for the Adult	2
HE 468s	Adult Education in Homemaking (3 wks.)	1½
HE 469s	Org. of Adult Homemaking Classes (3 wks.)	1½
HE 408	Income and Food Selection (3 wks.)	1½
HE 419	Refresher Course in Nutrition (3 wks.)	1½
HE 400	Consumer Problems	2-3
HE 469	Home Demonstration Work	2
HE 316	Clothing Economics	2
HE 370	History of Costume	2
HE 412	Dress Design	2-4
HE 322s	Textile Problems	2
HE 516	Textile Studies	2-4
HE 512	Clothing Studies	2-4
HE 514	Clothing Seminar	1-2
HE 426s	Parent Education (3 wks.)	1½
HE 470s	Problems in Parent Education	3
Art 400	Crafts	2-3
Art 410	Pottery	2
Art 460	Advanced Crafts	2
Art 426	Art Seminar	2
HE 438	Experimental Foods	3
HE 456	Advanced Experimental Foods	2-4
HE 402s	The Demonstration in Foods Teaching	2-3
HE 508	Food Seminar	1
HE 509	Food Studies	2-4
HE 418	Diet Therapy	3
HE 462s	Vitamin Studies	2
HE 460	Teaching Nutrition and Health	2-3
HE 511	Nutrition Seminar	1
HE 531	Progress in Nutrition	2
HE 506	Animal Experimentation	2-4
HE 452	Institutional Foods	3
HE 328	Institutional Administration	3
HE 454	Institutional Purchasing	3
HE 515	Institutional Management Studies	2-4
HE 513	Institutional Management Seminar	1
HE 352	Housing	2
HE 528	Seminar in Family Relationships	1
HE 426	Social Studies in Family Life	3
HE 428	Family Economics	2-3
HE 434	Household Equipment	2-4
Ed 411	Workshop in Home Economics Supervision	4-6
HE 421a-b	Family Life Studies (3 wks.)	1½-3
Ed 415	Adult Homemaking Education Workshop (3 wks.)	2-3

HE 401	Wartime Nutrition	2
HE 406	Wartime Curriculum in Home Economics Education	2
HE 456	Special Food Problems	3
HE 445	Workshop in Teaching Foods	2-3
HE 444	Workshop in Teaching Clothing	2-3
HE 400	Food Demonstration	2
HE 336	Clothing Problems	2
HE 320	Advanced Clothing Construction	2-3
HE 452	Institutional Foods	2-3
HE 507	Investigation in Home Economics	6

GROUP III—INDUSTRIAL EDUCATION

Course		Credit
Ed 480	Theory and Organization of General Shop	2
Ed 502	Supervision in Industrial Arts Education	2
Ed 503	Plans and Instructional Material II	2
Ed 540	Tests in Industrial Education	2
Ed 459	Trade and Occupational Analysis	2
Ed 407	Teaching Trade and Ind. Subjects in Voc. and Ad. Ed.	2
Ed 443	Problems in Teach. Trade and Ind. Sub. in Voc. and Ad. Ed.	2
Ed 407	Teaching Trade and Ind. Sub. in P-T School	2
Ed 443	Prob. Teach. Trade and Ind. Sub. in P-T School	2
Ed 470s	Industrial Education in Modern Curr. (3 wks.)	1½
IE 359	Industrial Mechanics	2
IE 568	Industrial Mechanics Seminar	1
IE 550	Finishing Seminar	1
IE 551	Experiments in Finishing	2-4
IE 552	Woodwork Seminar	1
IE 553	Experiments in Woodwork	2-4
IE 564	Auto Mechanics Seminar	1
IE 565	Experiments in Auto Mechanics	2-4
IE 556	Printing Seminar	1
IE 557	Experiments in Printing	2-4
IE 558	Drawing Seminar	1
IE 559	Experiments in Drawing	2-4
IE 560	Metal Seminar	1
IE 562	Experiments in Metal Work	2-4
IE 566	Experiments in Electrical Work	2-4
IE 465	Visual Education Seminar	1
IE 560	Experiments in Visual Education	2-4
IE 469s	Prob. in Curr. Constr. in Industrial Ed. (3 wks.)	1½
IE 510	Problems in Industrial Education	2
Ed 403	Trade and Industrial Education Workshop (3 wks.)	2
Ed 463	Industrial Arts Education Workshop (3 wks.)	2
IE 570	Investigation in Industrial Education	6

Note: Students with Industrial Education majors and Vocational majors in Industrial Education are required to take Education 510, Problems in Industrial Education, during the summer session in which the work on the investigation is begun.

Note: Where professional objectives make it advisable, Industrial Education majors may, with the permission of the Major Advisor, select Group III work from the Home Economics list and Home Economics majors may select work from the Industrial Education list. Vocational majors may select from either subdivision in Group III, in terms of professional objectives.

COURSES OF STUDY 1944-45

INDUSTRIAL EDUCATION

The four-year curriculum in the division of Industrial Education at The Stout Institute leads to the degree of Bachelor of Science with a major in Industrial Education or Vocational Education and the special state license.

Supplementary licenses to teach additional subjects are based on the electives selected. The general purpose of this curriculum is to provide a balanced educational development. This balanced development is brought about through closely integrated courses in sequenced progression within the several subject groups in technical work, in English, social science, science, mathematics, and education. The specific purpose in the curriculum is to prepare the students for the requirements of the industrial education teaching and supervisory positions in elementary schools, junior high schools, senior high schools, vocational schools, junior colleges, and technical institutes. Through controlled choices in the technical and educational sequences, provision is made for licensing or certificating requirements of state departments of education. Through carefully balanced sequenced progression in academic courses, a basic preparation is provided for continued professional study on a graduate level.

The first and second years are general preparation. Students are required to take the range of work indicated in these years in the technical and other sequences. The basic exploratory range of industrial work required in the first year is supplemented by controlled choices in the second year which continue the development of a broad general foundation in this sequence.

For those students who are not journeymen or who have less than four years of apprenticeship and three years of journeyman experience in the trade, the major in industrial education is open to them. For those who have the trade experience and who are eligible for classification as vocational teachers, either the major in industrial education or the major in vocational trade and industrial education may be selected.

The tabulated material immediately following indicates the curriculum definitions for the major in industrial education. Following this information is the statement indicating the modifications in the industrial education curriculum for those who are eligible for the curriculum with the vocational trade and industrial major.

CURRICULUM IN INDUSTRIAL EDUCATION
FIRST YEAR

			Sem. Hrs.
*English	102a-b	English Composition	6
English	106	Speech I	2
*Mathematics	209	College Algebra	4
Hygiene	101	Hygiene	1
Education	123	General Psychology	3
Ind. Education	(See List)	Shop, Drawing, Design	16
Physical Education	127	Physical Education	0

*Opportunity will be provided for remedial work for those who have deficiencies.

The 16 hours of shop work and drawing in the first year consist of eight courses in the following:

IE 107	Ele. of Hand Woodwork	IE 117	Printing
IE 131	Ele. Machine Woodwork	IE 119	Electrical
IE 115	Sheet Metal	IE 118	Freehand Drawing
IE 113	Machine Shop	IE 121	Ele. of Mech. Drawing

The shop work and drawing in the first year is required of all students. Recognition of incidental experiences by the students in the field of work covered by any of the courses in this group is made individually. For those entering with specific journeyman experience in trades, the freshman schedule is modified.

SECOND YEAR

			Sem. Hrs.
Chemistry	115	Inorganic Chemistry	5
Mathematics	213	Trigonometry	3
Social Science	309	General Sociology	3
Education	222	Principles of Secondary Education	2
Education	203	Plans for Instructional Material	2
Education	205	Methods of Teaching Ind. Arts	2
Education	257	Adm. and Org. of Industrial Ed. I	2
Ind. Education	(See List)	Shop, Drawing, Design	12

The 12 semester hours of shop and drawing in the second year will be selected as follows:

Three courses selected from the following in terms of the student's fields of concentration in technical work.

IE 226	General Drawing	IE 363	General Graphic Arts
IE 335	General Metal	IE 221	General Finishing
IE 116	General Woodwork	IE 369	Gen. Industrial Mechanics
IE 253	General Mechanics	IE 242	General Motor Mechanics

Three additional courses from general list in terms of fields of concentration in technical work.

The selection of technical courses in shop work, drawing, and design in the second, third, and fourth years is based upon continuous survey studies. The choices in the second year continue the exploratory range begun in the first year and include instructional experiences in typical general shops. These are selected in terms of the fields of concentration which the individual student plans to develop in his technical work. The selections of technical courses in the third and fourth years are based upon the experiences of the student in the first and second years, a detailed study of the trends in educational requirements as evidenced in the distribution in calls for teachers, and continuous survey studies of technological, structural, and functional change in modern industry. The implications of the results of these studies are used in teacher training to meet the requirements for general education and for vocational education. Selections of courses are combinations made from the following:

Aircraft Construction
Carpentry
Cabinetmaking
Patternmaking
Woodturning
Furniture Upholstery
General Woodwork
General Finishing
Painting and Decorating
Oxy-acetylene & Electric Welding
Sheet Metal
Machine Shop
Architectural Drawing
Aircraft Drawing
Freehand Drawing
Machine Drawing
General Drawing
Mechanical Drawing

General Mechanics
General Industrial Mechanics
Industrial Mechanics
General Motor Mechanics
Auto Mechanics
Foundry
General Metal
General Graphic Arts
Printing
Masonry
General Building Construction
House Furnishing
Electrical Work
Radio

Those who wish technical courses in shopwork, drawing, or desgin for preparation for technical or junior executive positions in industry will find selections from the technical courses particularly applicable.

THIRD YEAR

			Sem. Hrs.
English	346	Expository Writing	3
English	223	Speech II	2
Physics	421	Physics I	5
Social Science	201	General Economics	3
Social Science	311	Government	3
Education	303	Educational Psychology	2
Education	357	Adm. & Org. of Ind. Ed. II	2
Education	408a	Observation	1
Education	408b	Student Teaching	2
General Electives			4
Industrial Ed.	(See List)	Shop, Drawing, Design	6

FOURTH YEAR

			Sem. Hrs.
Additional Science			3
Additional Social Science			4
General Electives			7
Education Electives			6
Education	408c	Student Teaching	2
Industrial Ed.	(See List)	Shop, Drawing, Design	10

Electives

Supplementary licenses to teach subjects in addition to industrial subjects are based on electives selected. In addition to the major in industrial education, students are required to arrange their selections of electives to complete two academic minors. Fifteen semester hours of work in a given subject matter field constitutes a minor.

Education Electives

Adolescent Psychology	2
Visual Education	2
*Vocational Guidance	2
Statistics	2
Educational Measurements	2
Theory and Organization of the General Shop	2
*The Part-Time School	2
*Teaching Trade and Industrial Sub. in the Part-Time School	2

(*See Wisconsin State Board of Vocational and Adult Education classification requirements.)

General Electives

English

Students desiring to complete an English minor should select courses from the following group in sufficient amount

to complete fifteen semester hours in English, counting English courses included in the required groups.

Fiction	2
Drama	2
Poetry	2
Play Production	2
Survey of English Literature	2

History and Social Science

Students desiring to complete a social science minor should select courses from the following group in sufficient amount to complete fifteen semester hours in social science, counting social science courses included in the required groups.

Recent U. S. History	3
Labor Problems	3
American Politics	2-3
History of the Americas	4
Modern World	4
Problems of American Society	3

Science

Students desiring to complete a science minor should select from the following group in sufficient amount to complete fifteen semester hours in science, counting science courses included in the required groups.

Physics II	3
Physics III	3
Chemistry III (Chemistry of materials)	3
Organic Chemistry	4
Biology	3
Bacteriology	3
Physiology	3
Meteorology	3
Zoology	2

Mathematics

Students desiring to complete a mathematics minor should select courses from the following group in sufficient amount to complete fifteen semester hours in mathematics, counting mathematics courses included in the required groups.

College Geometry	2
Analytic Geometry	2
Calculus	4
Elements of Navigation	2

Music

A maximum of two semester hours of music may be included in the academic electives to count toward graduation requirements.

Solfeggio	1
Harmony Ia	1
Harmony Ib	1
Introduction to and appreciation of music	1
Theory	1

Conducting	1
Men's Glee Club	1
Band	1
Orchestra	1

Coaching

Technique of Coaching Football	1½
Technique of Coaching Basketball	1½

COOPERATIVE WORK

An expanding program of opportunity for cooperative work for students in the Division of Industrial Education is being developed. This work is of two types, teaching and shop experience. In the supervised teaching which all students must take in the professional group, opportunity is offered at The Stout Institute for such teaching in grades 7 to 12 in the Menomonie Public Schools and in the day and evening classes of the Menomonie Vocational School. Through special arrangements teaching experience in certain other types of schools outside of Menomonie is available for a limited number of students. Through these opportunities, in addition to those on the campus, all types of teaching positions open to Stout graduates are available for supervised teaching during the training period.

All students in the Division of Industrial Education select certain concentrations of work in their technical sequence in shop work, drawing, and design. From time to time opportunities are available for advanced students to spend some time in certain selected industrial establishments securing practical production experience. Constant effort is maintained to keep such opportunities available in establishments representing the various content areas included in the technical sequence. The purpose of such work is to give the students modern industrial experience to extend the training experiences secured on the campus. For students who come to The Stout Institute after having already attained sufficient journeyman experience in a trade, the opportunities for the vocational major are available.

VOCATIONAL TRADE AND INDUSTRIAL EDUCATION MAJOR

Students interested in trade and industrial education teaching and who wish to select the vocational major, must be eligible for vocational teaching classification upon graduation. Ordinarily this vocational classification will be based on four years of apprenticeship and three years of journeyman experience or the equivalent thereof in terms of occupational definition. Students who are not eligible for vocational classification upon graduation will not be eligible for the curriculum leading to the vocational major.

The proportioning and distribution of academic, education and technical courses (shop, drawing and design) will be similar to that in the industrial education curriculum. In the education sequence the amount of credit will be the same as in the industrial education curriculum. The vocational education classification courses will be required. Where necessary these courses will be used in substitution for courses now in the education sequence. These courses referred to as classification courses are the following:

The Part-time School
Teaching Trade and Industrial Subjects in the Part-time School
Educational Psychology

Vocational Guidance
Problems in Teaching Trade and Industrial Subjects in the Part-time School

Trade experience credit examinations will be arranged to permit candidates for the undergraduate trade and industrial vocational major to earn through examination up to a maximum of twenty-four semester hours of credit in the total required for the degree of Bachelor of Science. This credit will be available in six semester hour amounts at certain stated periods in the student's progress through the other credits earned through residence work. In the schedule listed below the plan and the rate at which the twenty-four semester hours of trade examination credit become available is indicated.

Trade and Industrial Education Vocational Major (128 Semester Hours)

When 32 Sem. Hrs. residence completed	6 Sem. Hrs. Credit on trade experience examination released
When 32 (additional)	6 (additional)
When 32 (additional)	6 (additional)
When 8 (additional)	6 (additional)
104	24
	128

The credit and grade point requirements for the residence work will be the same as those for the industrial major. For graduation it will be necessary for the student to have as many grade points as semester hours of residence credit.

In conducting the examinations based on trade experience, use will be made of advisory committees to assist The Stout Institute in the formulation and conducting of examinations. These advisory committees will include representatives of the State Board of Vocational and Adult Education, employers in the trade in which the candidate is being examined, employees in the same trade, and the teacher training committee of the Wisconsin Vocational Directors Association. The examinations will be conducted at The Stout Institute and will include oral, written and performance sections. In the field conferences in connection with the preparation and development of these examinations, The Stout Institute will have the assistance of the State Board of Vocational and Adult Education. In the conducting of these examinations, the major portion of the writtten and performance parts of the examination will be completed before the committee meets at The Stout Institute. At the time of the oral examination, the results of the written and performance portions of the examination will be checked. The candidate will be required to meet a reasonable fee charge for the examination, such fee to be used in meeting the expenses incurred in connection with the examination.

The work outlined for the curriculum for the vocational major is closely articulated with classification requirements of the Wisconsin State Board of Vocational and Adult Education.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under Section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational

and adult education, general educational training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education and is classifying such teachers on the basis of these standards.

Teachers of Trade and Industrial Subjects
Junior Classification

Junior Classification is granted to and held by:

A. All teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee prior to January 1, 1926.
In Milwaukee prior to March 17, 1941, who:
1. Are not yet qualified to hold a higher classification.
2. If not already with a record of successful experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience, spend one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each three year period. The following courses must be taken first:
The Part-Time School ..... 2 credits
Teaching Trade and Industrial Subjects in the Part-Time School ..... 2 credits

Note: Three year periods mentioned above are those ending as of August 31, 1944—1947—1950—etc.

B. All teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee on or after January 1, 1926.
In Milwaukee on or after March 17, 1941, who:
1. Are not yet qualified to hold a higher classification.
2. Have had successful experience in the vocation, taught for at least three years beyond the completion of apprenticeship, or the equivalent experience. Or have had successful experience in the vocation taught for at least one and a half years beyond the completion of apprenticeship, or the equivalent experience, and have agreed to and actually do spend one summer, or the equivalent, during each two year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Have agreed to and actually do spend one summer, or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each two year period. The following courses must be taken first:
The Part-Time School ..... 2 credits
Teaching Trade and Industrial Subjects in the Part-Time School ..... 2 credits

Note: Two year period mentioned above are those ending with the second August 31st after the teacher enters upon his work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of trade and industrial subjects in the Wisconsin schools of vocational and adult education employed—

Outside of Milwaukee prior to January 1, 1926.
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.
2. Have completed five years of successful teaching of the trade and industrial subjects indicated in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent, in professional improvement. At least six credits must be earned in courses approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. The following courses must be taken first:
   The Part-time School ..... 2 credits
   Teaching Trade and Industrial Subjects in the Part-time School ..... 2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches the trade and industrial subject indicated successfully in the Wisconsin schools of vocational and adult education.
2. If not already with a record of successful experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience, spends one summer, or the equivalent, during each three year period in practical work in the trade or occupation indicated until such record shall total three full years.
3. Has agreed to and actually does spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education. At least six credits must be earned over each three year period. The following courses must be taken first:
   The Part-time School ..... 2 credits
   Teaching Trade and Industrial Subjects in the Part-time School ..... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1944—1947—1950—etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of trade and industrial subjects who meet the following requirements:

1. Successful experience in the vocation taught for at least three years beyond the completion of apprenticeship, or the equivalent experience.
2. Successful teaching experience of the trade and industrial subject indicated for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
3. Completion of two years of college work in an approved teacher training institution, or the equivalent training.

Note: Time spent by a person without practical experience in a trade school or technical school learning elementary processes, if applied on the apprenticeship period mentioned above, cannot be counted here. This two years of school training is to be in addition to the learning of the elementary trade or industrial processes.

4. Completion of the following courses, which may be included in the two years of college training required (under 3) above, or the equivalent specific training:
   (1) The Part-time School ..... 2 credits
   (2) Teaching Trade and Industrial Subjects in the Part-time School ..... 2 credits
   (3) Educational Psychology ..... 2 credits
   (4) Vocational Guidance ..... 2 credits
   *(5) Problems in Teaching Trade and Industrial Subjects in the Part-time School ..... 2 credits
   *This course cannot be taken for classification credit until the teacher has a record of three years experience in schools of vocational and adult education.
   (6) Elementary Economics ..... 4 credits
   (7) Socio-economic Electives ..... 4 credits
   Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credit total required throughout these standards.

Unclassified

All teachers of trade and industrial subjects who do not have the qualifications for any of the ranks of classification as herein set up shall be designated as Unclassified.

HOME ECONOMICS

The study of Home Economics is planned to contribute to a functional program, which will help individuals to understand some of the responsibilities, demands and opportunities encountered in modern life. At the college level, a Home Economics curriculum established on this philosophy should have as its major purpose the centering of its activities about family living so that the student will become sensatized to the social value and place of the home and family. Therefore a wide range of work in fields of general social interests and in fields of arts and sciences which are closely related to problems of family life as well as technical courses in Home Economics are offered.

The curriculum in Home Economics at The Stout Institute has been developed through the cooperative thinking and selection by faculty and students of four areas of experience needed in modern living. In each of the four years, one of these areas has been chosen as a basis for achieving the desired goals. The area of personal development is the center of interest for the freshman year, that of family relationships the determining factor for the sophomore year, social-civic relations for the junior year, and professional relations for the senior year of work. Although the cumulative development of each year relates more to the one area than to the others, giving a unity of experiences, the interdependence of all areas is also emphasized and the experiences through which the students attack their problems vary with circumstances and

with the needs of the particular person.

The curriculum pattern for the first two years is much alike for all students in the Divison of Home Economics. There is considerable opportunity for the adjustment of group instruction to meet individual needs. For instance, students who enter college very well prepared in certain subjects may take advanced courses. Later, through a choice of electives, the students may select combinations of courses to conform to special interests. Close inter-relations of the various types of work in the division has been a desired goal.

The curricular offerings in the Division of Home Economics are planned to meet student needs in family and community living and to offer a worthwhile training in the many professional fields open to home economists. Graduates of this college are prepared to fill positions in the teaching field, in hospital dietetics, institutional management, commercial demonstration work, in service with the Farm Security Administration and with the Agricultural Extension Service.

The Home Economics Division at The Stout Institute meets two purposes in the organization of its curriculum. It provides not only a cultural course based on the needs of most women but also professional training for homemakers, dietitians, food managers, commercial home economics employees, and extension workers, as well as for teachers.

The curriculum in this division meets the requirements of 124 semester hours for the degree of Bachelor of Science in Home Economics Education. It also permits the meeting of requirements for teachers' licenses and those of the American Dietetics Association for dietitians and employees in institutions.

Students enrolled in this division of the college must complete a major of 40 semester hours in home economics, and two academic minors of 15 hours each. Reasonable modification of requirements made advisable by student needs and interests may be recommended to the Dean of the Division of Home Economics for approval.

CURRICULUM IN HOME ECONOMICS

First Year

	Sem. Hrs.
English 102a-b—English Composition	6
English 106—Speech I	2
Physiology 214—General	5
Education 123—General Psychology	3
Home Economics 116—Personal Development	2
Home Economics 102—Clothing	3
Home Economics 112—Principles of Nutrition	2
Home Economics 114—Food Preparation	2
Art 106—Foundations of Art	3
Art 220—Clothing Selection	2
Physical Education 128	0

Second Year

English 216—Survey of English Literature	2
Chemistry 115—Inorganic	5
Chemistry 208—Organic	4
Social Science 309—Sociology	3
Home Economics 212—Family Nutrition	3
Home Economics 230—Foods	3
Home Economics 224—Growth and Development of Pre-school Child	2
Home Economics 317—Consumer Information	3

Home Economics 218—Clothing Construction	3
Art 334—House Furnishing	3
Physical Education 228	0

Note: 1. Chemistry 208 must precede or parallel Home Economics 212.
2. Home Economics Education students must register in Education 222 during the second semester of the Sophomore year or first semester of the Junior year.
3. Dietetics and Institution Management students will register in Bacteriology 206 and not take Home Economics 218 or Art 334 unless desired.

A Home Economics Education

Third Year

English 216—Survey of English Literature	2
Social Science 201—Economics	3
Social Science 320—Problems of Family	3
Education 320—Methods and Evaluation of Home Economics Education	3
Education 222—Principles of Secondary Education	2
Home Economics 308—Meal Management	3
Home Economics 403—Home Management	3
Electives	
Home Economics	7
Academic	6

Fourth Year

English 346—Expository Writing	2 or 3
Biology 442—Community Hygiene	2 or 3
Social Science 410—Modern World	4
or	
Social Science 407—History of America	4
or	
Social Science 311—Government	3
Education 303—Educational Psychology	2
Education 410—Curriculum and Administration of Home Economics Education	3
Education 408 Student Teaching	6
Home Economics 424—Guidance Practices with Pre-School Children	2
Electives	
Home Economics	4
Academic	5

B. Dietetics

Third Year

Chemistry 322—Biochemistry	3
Biology 362—Advanced Physiology	3
Education 303—Educational Psychology	2
Social Science 201—Economics	3
Home Economics 308—Meal Management	3
Home Economics 310—Nutrition and Dietetics	3
Home Economics 452—Institution Food Preparation	3
Electives	
Home Economics	6
Academic	6

Fourth Year

Social Science 326—Problems of Family 3
Education 320—Methods and Evaluation in Home Economics Education 3
Home Economics 328—Institution Administration 3
Home Economics 418—Diet in Disease 3
Home Economics 403—Home Management 3
Home Economics 438—Experimental Foods 3

Electives

Home Economics 6
Academic 8

C. Institution Management

Third Year

Social Science 201—Economics 3
Social Science 326—Problems of Family 3
Education 303—Educational Psychology 2
Home Economics 300—Applied Institution Management 3
Home Economics 308—Meal Management 3
Home Economics 315—Textiles 3
Home Economics 403—Home Management 3
Home Economics 452—Institution Food Preparation 3

Electives

Home Economics 4
Academic 5

Fourth Year

Biology 442—Community Hygiene 2 or 3
Social Science 414—Labor Problems 3
Education 320—Methods and Evaluation in Home Economics Education 3
Home Economics 328—Institution Administration 3
Home Economics 463—Institution Management Problems 3
Home Economics 438—Experimental Foods 3

Electives

Home Economics 6
Academic 8

D. General Home Economics

Third Year

Biology 442—Community Hygiene 2 or 3
Social Science 201—Economics 3
Home Economics 308—Meal Management 3
Home Economics 403—Home Management 3
Art 206—Art Appreciation 2
Choice
(Home Economics 438—Experimental Foods 3
(Home Economics 400—Food Demonstrations 2
or
(Home Economics 315—Textiles 3
(Home Economics 320—Adv. Clothing Construction 2 or 3

Electives

Home Economics 6
Home Economics 6
Academic 6 or 7

Fourth Year

English 326—Expository Writing 2 or 3
Social Science 326—Problems of Family 3
Social Science 410—Modern World 4
or
Social Science 407—History of Americas 4
or
Social Science 311—Government 3
Home Economics 424—Guidance Practices with Pre-School Children 2
Choice
(Home Economics 456—Special Food Problems 3
(Home Economics 300—Applied Institutional Management 3
or
(Home Economics 312—Applied Dress Design 2 or 3
(Home Economics 316—Clothing Economics 2 or 3

Electives

Home Economics 8
Academic 8

ELECTIVES

In addition to the requirements for a major in Home Economics, students must arrange their choice of electives to complete two academic minors. Fifteen semester hours in courses of a particular subject matter field constitutes a minor.

Students may also choose electives in subject matter fields of their special interests and needs, to complete the total number of hours required.

Education	**Sem. Hrs.**
Psychology 350—Adolescent Psychology	2
Education 441—Educational Measurements	2
Education 461—Statistics	2
Education 360—Visual Education	2
Education 401—Vocational and Educational Guidance	2
English	
English 406—Drama	2
English 402—Fiction	2
English 444—Play Production	2
English 404—Poetry	2
English 223—Speech II	2
Science and Mathematics	
Bacteriology 206—General Bacteriology	3
Chemistry 322—Biochemistry	3
Biology 122—General Biology	3
Biology 362—Advanced Physiology	2
Biology 442—Community Hygiene	2
Biology 432—Heredity and Eugenics	2
Physics 421—Physics I	5
Physics 423—Physics II	3
Biology 316—Zoology	2
Social Studies	
Social Science 417—American Politics	2-3
Social Science 301—Economic History of the U. S.	3

Social Science 311—Government	3
Social Science 407—History of the Americas	4
Social Science 414—Labor Movements	3
Social Science 410—Modern World	4
Social Science 215—Origins and History of World War II	2-3
Social Science 409—Recent U. S. History	3

Music

(Maximum of two semester hours may be included in academic electives to count toward graduation)

Music 150—Solfeggio	1
Music 151—Harmony Ia	1
Music 152—Harmony Ib	1
Music 153—Introduction to and Appreciation of Music	1
Music 160—Theory	1
Music 162—Conducting	1
Music 165—Women's Glee Club	1
Music 166—Band	1
Music 167—Orchestra	1

Home Economics

Art 206—Art Appreciation	2
Art 430—Art History	2
Art 332—Advanced Design	2
Art 400—Crafts	2-3
Art 460—Advanced Crafts	2-3
Art 323—Problems in House Furnishing	2
Art 446—Sketch	1
Art 436—Clothing Design	2
Home Economics 438—Experimental Foods	3
Home Economics 456—Special Food Problems	2-3
Home Economics 400—Food Demonstrations	2
Home Economics 300—Applied Institution Management	3
Home Economics 452—Institution Foods	3
Home Economics 328—Institution Administration	3
Home Economics 310—Nutrition and Dietetics	3
Home Economics 333—Household Equipment	2
Home Economics 352—Housing	2
Home Economics 318—Family Health	2
Home Economics 312—Applied Dress Design	2-3
Home Economics 314—Children's Clothing	2
Home Economics 316—Clothing Economics	2
Home Economics 320—Advanced Clothing Construction	2-3
Home Economics 336—Clothing Problems	2
Home Economics 370—History of Costume	2
Home Economics 315—Textiles	3

Vocational Homemaking Education Major

Women students interested in the vocational education major must be eligible for the vocational teaching classification upon graduation.

The distribution of the courses required for a major in this division will be very similar to that in the curriculum of the home economics division. The academic and education courses will be distributed as they

are in that curriculum. The vocational education courses required will be

The Part-Time School
Teaching Homemaking in the Part-Time School
Psychology
Vocational Guidance
Problems in Teaching Homemaking in the Part-Time School.

Technical courses will be taken from the list required in home economics, such requirements, however, to be modified to fit the particular needs of the individual student.

Credit examinations in technical courses in which the candidate has had teaching or trade experience will be allowed up to a maximum of 24 semester hours. Such credit will be released in units of 6 semester hours at the completion of each 32 semester hours of residence class work. The method for conducting such examinations will be similar to that set up for the men majoring in the vocational trade and industrial courses. (See Pg. 33)

The total amount of credit required for this major will be 128 semester hours, with grade point requirements equalling the semester hours of credit.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION CLASSIFICATION REQUIREMENTS

Under Section 41.15 (6) of the Wisconsin Statutes the State Board of Vocational and Adult Education has set up certain standards of practical occupational experience, teaching experience in schools of vocational and adult education, general educational training, and specific professional preparation for teachers in the Wisconsin schools of vocational and adult education, and is classifying such teachers on the basis of these standards.

Teachers of Homemaking
Junior Classification

Junior Classification is granted to and held by:

A. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
   Outside of Milwaukee prior to January 1, 1926
   In Milwaukee prior to March 17, 1941, who:
   1. Are not yet qualified to hold a higher classification.
   2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience, spent one summer, or the equivalent, during each three year period in practical homemaking as indicated above until such record shall total twelve months.
   3. Have agreed to and actually do spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education. At least six credits must be earned over each three year period. The following courses must be taken first:
      The Part-time School ..... 2 credits
      Teaching Homemaking in the Part-time School.... 2 credits
      Note: Three year periods mentioned above are those ending as of August 31, 1944—1947—1950—etc.

B. All teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee on or after January 1, 1926
In Milwaukee on or after March 17, 1941, who:

1. Are not yet qualified to hold a higher classification.
2. Have had practical experience in homemaking involving some responsibility for at least twelve months, or the equivalent experience, or have had such practical homemaking experience for at least six months, or the equivalent, during each two year period in such practical homemaking until such record shall total twelve months.
3. Have completed two years of the home economics course in an approved teacher training institution of college rank, or the equivalent training.
4. Have agreed to and actually do spend one summer, or the equivalent, during each two year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each two year period. The following courses must be taken first:
   The Part-time School ..... 2 credits
   Teaching Homemaking in the Part-time School.... 2 credits
   Note: Two year periods mentioned above are those ending with the second August 31st after the teacher enters upon her work in the school of vocational and adult education and all subsequent two year periods.

Senior B Classification

Senior B Classification is granted to all teachers of homemaking in the Wisconsin schools of vocational and adult education employed—
Outside of Milwaukee prior to January 1, 1926
In Milwaukee prior to March 17, 1941, who:

1. Are not yet qualified to hold Senior A Classification.
2. Have completed five years of successful teaching of homemaking in the Wisconsin schools of vocational and adult education.
3. Have completed one summer, or the equivalent, in professional improvement. At least six credits must be earned in courses approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. The following courses must be taken first:
   The Part-time School ..... 2 credits
   Teaching Homemaking in the Part-time School.... 2 credits

Senior B Classification will be extended as long as the possessor:

1. Teaches homemaking successfully in the Wisconsin schools of vocational and adult education.
2. If not already with a record of practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent, during each three year period in practical homemaking as indicated above until such record shall total twelve months.
3. Has agreed to and actually does spend one summer, or the equivalent, during each three year period in professional improvement along the lines laid down for securing Senior A Classification and approved by the local board of vocational and adult education and the State Board of Vocational and Adult Education. At least six credits must be earned over each three year period. The following courses must be taken first.
   The Part-time School ..... 2 credits
   Teaching Homemaking in the Part-time School.... 2 credits
   Note: Three year periods mentioned above are those ending as of August 31, 1944—1947—1950—etc.

Senior A Classification

Senior A Classification is granted to and held by all teachers of homemaking who meet the following requirements:

1. Practical experience in homemaking involving some degree of responsibility for at least twelve months, or the equivalent experience.
   Note: Practical experience in homemaking involving some degree of responsibility is considered to be:
   a. Experience with entire responsibility for all homemaking activities such as would be the case were the housewife to be away or ill or the mother to die, leaving full responsibility to be assumed by the candidate.
   b. Experience as an employee in the home, responsible for certain homemaking activities such as would be the case where the candidate works with and assists the housewife but usually has delegated or assumes responsibilities for definite activities.
2. Occupational experience in employment other than teaching or homemaking for at least three months, or equivalent experience.
3. Successful teaching experience of homemaking for not less than three full years in schools of vocational and adult education; one of these three years must be in Wisconsin.
4. Completion of a four year college course with a home economics major in an approved teacher training institution, or the equivalent training.
5. Completion of the following courses, which may be included in the four years of college training required (under 4 above), or the equivalent specific training:
   (1) The Part-time School ..... 2 credits
   (2) Teaching Homemaking in the Part-time School ..... 2 credits
   (3) Educational Psychology ..... 2 credits
   (4) Vocational Guidance ..... 2 credits
   *(5) Problems in the Teaching of Homemaking in the Part-time School ..... 2 credits
   (6) Elementary Economics ..... 4 credits
   (7) Socio-economic Electives ..... 4 credits

   *This course cannot be taken for classification credit by teachers holding Junior Classification until they have completed an approved four year college course in home economics and have a record of three years' experience in the schools of vocational and adult education.

   Note: Four credits of graduate work done by a candidate for a higher degree is accepted in lieu of the six credit total required throughout these standards.

DESCRIPTION OF COURSES

LIBERAL ARTS

Education and Psychology

PSYCHOLOGY

Education 123 General Psychology

Scientific vs unscientific approaches in understanding man. Course treats efficient methods in study, individual differences and their measurement, development of motives, emotions and their dynamics, behavior and personality development, attention and thinking. Consideration given to special psychological problems of college and community life.
Sem. I, II.
Mr. Marx
Credit: 3

Education 303 Educational Psychology

Prerequisite: Education 123 General Psychology.

A course parallel to practice teaching and closely knit with its needs. Content covers individualization in learning, control of procedures in establishing proper motivation, comparison of methods in teaching, memory, forgetting, discipline, learning of skills, and the special problems introduced by varied biological and psychological backgrounds.
Sem. I, II.
Mr. Marx
Credit: 2

Education 350 Adolescent Psychology

Prerequisite: Psychology 123.

A comprehensive study of adolescent years, embracing the physical, emotional, social, moral and intellectual developments of the adolescent. An attempt is made to derive theory from only objectively proven facts and to give much practice in applying it to the practical problems of the home, school and community.
Sem. I, II.
Mr. Marx
Credit: 2

Education 447 Psychology of Personality and Mental Hygiene

Prerequisite: Psychology 123, General Psychology or equivalent.

A course designed to give the student an understanding of himself and a basis for self improvement. Practical procedures will be outlined for the removal of objectional habit systems and the development of pleasant personalities, poise, emotional stability and socially desirable attitudes.
Mr. Marx SS
Credit: 2

Education 449 Psychology of Counseling and Guidance

Prerequisites: Psychology 123, General Psychology or equivalent.

The technique of selecting ultimate aims in life and directing individuals into proper channels. Course involves predicting and controlling behavior of self and others, precise methods of trait measurement and modern procedures for capitalizing upon one's potentialties. Supervised practice in counseling and guidance will be offered, with special emphasis on methods of creating friendly cooperation between the counselor and the counselee.
Mr. Marx SS
Credit: 2

EDUCATION

Education 203 Plans for Instructional Material

Prerequisites: 12 Sem. Hrs. in Shop and Drawing Work.

Factors underlying the appropriate selection and preparation of instructional material in the industrial arts field, with the development of plans for effective presentation. Selected types of work prepared in a series of consecutive units for typical teaching situations. Unit analysis, preparation of instruction sheets, teaching plans.
Sem. I, II.
Mr. Brown
Credit: 3

Education 222 Principles of Secondary Education

A total view of education with emphasis upon the secondary school and the practical arts. Course embraces the historical aspect, current world practices, articulation between educational systems with a detailed study of the purposes of each, the broad aims of education and the specific aims of the practical arts, local and state problems of finance, and methods of appraisal of results of teaching. Out-of-class contact with secondary schools and secondary school students a requirement.
Sem. I, II.
Mr. Marx
Credit: 2

Education 320 Methods and Evaluation in Home Economics Education

Prerequisite: Parallel Psychology 303.

Educational values of home economics. Methods of classroom teaching. Provision for individual differences. Evaluation of results of instruction. Observation of junior and senior high school classes in the study of all aspects of home economics.
Sem. I, II.
Miss Walsh, Miss Moore, Miss Harper
Credit: 3

Education 410 Curriculum and Administration of Home Economics Education

Prerequisite: Education 209, 320, if possible, 408.

Place of home economics in general education. Development of home economics curriculum in all day schools. Administration of the homemaking department. Professional development of the teacher.
Sem. I, II.
Miss Walsh
Credit: 3

Education 451 Measurements in Home Economics

Prerequisites: Graduate or advanced undergraduate standing.

Emphasis will be placed upon evaluating the total behavior of the student, together with such techniques as are available for the interpretation of these results. Study and preparation of devices for evaluating ability and achievement in home economics.
S.S.
Credit: 2

Education 508 Curriculum Studies in Home Economics

Prerequisite: Graduate standing.

A review of recent investigations of educational programs, of experimentation in organizing home economics material in accordance with the modern philosphy of education, and of the relation of these studies to an integrated curriculum. Constructive work in setting up goals and planning courses of study for various types of schools.
S.S.
Credit: 2-4

Education 257 Administration and Organization of Industrial Education I

Prerequisite: Sophomore standing in education sequence.

Procedures in occupational and subject analysis for instructional use. Study of the instructional, occupational and administrative factors which control the identification, interpretation and arrangement of industrial content for educational use.
Sem. I, II.
Mr. Bowman
Credit: 2

Education 357 Administration and Organization of Industrial Education II

Prerequisite: Education 257 and junior standing in education sequence.

Definition of teacher's professional skill in analysis, selection, and teaching on the lesson level, subject level, and curriculum level with solutions of typical problems. Administrative practice analyzed in functional assignment of school operating responsibility; measurement of teaching and supervisory staffs; maintaining and developing the teacher's professional skill; functioning of the school system through continuous survey; the school budget and financial control; maintaining and controling of buildings and equipment.
Sem. I, II.
Mr. Bowman
Credit: 2

Education 360 Visual Education

Prerequisites: Junior standing in Education.

The development of visual instruction and its uses in industry, commerce and general education. Special emphasis on visual instruction in the practical arts.

Actual experiences and participation in the construction of typical visual aids and in planning and presentation of lessons aided by visual means. Proficiency developed in operating, adjusting and servicing typical projectors. Practice in locating, ordering and handling visual aids obtained from outside sources. Administrative phases of a visual education program, service or center in a school system.
Sem. II.
Credit: 2
Mr. P. C. Nelson

Industrial Education 560 Visual Education II Experiments in Visual Education

Prerequisite: Education 360.

Each experiment is selected on the basis of the individual's needs and interests, on his previous experience and on the educational value of the project. Some of the typical fields for experimentation are: Development of new methods, devices, and applications, refinement of previous discoveries and improved uses of visual aids. Determination of educational values of specific visual aids and of methods used in visual instruction. Comparisons and tests of apparatus and equipment to determine efficiency, durability, and convenience. A report is required, written in approved form, to cover such details as the purpose of the experiment, methods employed, sources used, and results obtained.
S. S. only.
Credit: 2
Mr. P. C. Nelson

Education 444 Workshop in Teaching Clothing

The present situations have created many clothing problems due to textile shortages, reduced man power, and limited machines; all of which have contributed to the production of civilian clothing. Therefore, changes in subject matter, processes and methods of teaching are imperative. The clothing workshop is designed for those people who are interested in doing intensive work in some clothing problems such as a study evaluation in the teaching of clothing, conservation of clothing to meet shortages, sewing machine clinic, new use of foundation patterns and many others.
S.S.
Credit: 2-4

Education 445 Workshop in Teaching Foods

The importance of foods to the health of all people makes the question of distribution and utilization of such commodities everyone's responsibility, and the solving of such problems offer many new complications to those teaching in this field. Studies in the workshop will be concerned with such problems as preservation of foods, right cooking to preserve nutrient values, meal planning, the use of food alternates, the use of rationed foods and others. New teaching skills may have to be developed in the expanded use of the demonstration method and in the use of current reference materials. Members of the group will develop subject matter, manipulative processes, and other techniques which will meet their specific needs.
S.S.
Credit: 2-4

Education 205 Methods of Teaching Industrial Arts

Prerequisite: Education 203.

Techniques employed in analysis and organization of units for the different levels of instruction, the development of pupil-purpose progress charts, factors underlying personnel organization and shop management; construction of tests and rating scales for evaluation. Methods applied to specific teaching situations.
Sem. I, II.
Credit: 2
Mr. Brown

Education 408a Observation

Prerequisites: Education 203, Education 357b.

Observation is an integrated course planned for pre-service student teachers. Professional and technical course content is integrated with the teaching of industrial arts. Directed observation of the following types of industrial arts programs: Comprehensive General Shops, Unit General Shops, and Unit Shops. Graded student teaching participation is a part of the program.
Sem. I, II.
Credit: 1
Mr. Wigen

Education 408b Student Teaching (Industrial Education)

Prerequisites: Education 203, Education 357b, Education 408a.

Student teaching opportunities are provided for the junior and senior high school levels of education in the major areas of the Industrial Arts program. Opportunities are available for student teachers to acquire experience in several types of Industrial Arts shops: the Comprehensive General Shop, Unit General Shop, and the Unit Shop. Individual conferences with the Critic Supervisor and group conferences with the Supervisor of Student Teaching.
Sem. I, II.
Credit: 4-6
Mr. Wigen and others

Education 408 Student Teaching in Home Economics

Prerequisites: Education 123, 320.

Induction into teaching through observation and participation, gradually working into the varied activities and responsibilities of a teacher of home economics. Teachers participate as completely as possible in the entire educational program and in the life of the community. Experience is available in both on-and-off campus teaching centers.
Sem. I, II.
Credit: 6
Miss Walsh, Miss Moore, Miss Harper
Note:
The State Board of Vocational and Adult Education has made it possible for senior students in home economics education to secure experience in the following cooperating schools:
La Crosse School of Vocational and Adult Education; Mr. John B. Coleman, Director, Mrs. Katherine Schultz, Supervising Teacher of Homemaking.
Dunn County School of Agriculture; Miss Clara Moeschler, Superintendent, Miss Margaret Gibson, Supervising Teacher of Homemaking.
Mondovi High School; Mr. C. L. Dodge, Superintendent, Mrs. Jane Rosenthal, Supervising Teacher of Homemaking.
Durand High School; Mr. Glenn A. Hart, Superintendent and Mrs. Virginia Hansen, Supervising Teacher of Homemaking.

Education 441 Educational Measurements

Prerequisites: Education 203 and 222, or Education 320.

Improvement of the written examination with special reference to validity, reliability, and objectivity. The course includes the present status, types, selection, characteristics, limitations, possibilities, use and interpretation of tests, as well as the conversion of raw scores and the distribution for the determination of grades. Emphasis is placed on the construction of informal objective tests so that the student may construct and use same when out in the field.
Sem. I, II.
Credit: 2
Mr. Brown, Mr. Rich

Education 461 Statistics

Prerequisites: Senior Standing.

Includes method of collecting, evaluating and recording statistical facts pertinent for the interpretation of data and the technique of drawing conclusions.
Sem. I, Alternate years.
Credit: 2
Mr. Rich, Mr. Brown

Education 480 Theory and Organization of General Shop

Prerequisites: Senior Standing (Junior Standing permissible if student has senior standing in educational sequence).

The history of the general shop, including an analysis of the educational considerations, the identifications of all types of general shops with a study of each to include pupil classifications of boys and girls, equipment combinations, shop operating problems, including those of personal organization, stock room and store room organization and operation. Directed observation in the several types of general shops in The Stout Institute and assignments as assistants in student teaching practice classes in selected general shops. The identification of instructional methods, teaching devices, and preparation procedures in preparing instructional material. Identification of related information, classifications, and sources.
Sem. I, II.
Credit: 2
Mr. Bowman, Mr. Brown, and others.
Note: Men who have completed the requirements in student teaching and the above course, will be permitted, so far as facilities allow, to take an additional two hours of student teaching in general shop work in the senior year and substitute this for two semester hours of technical work in shop work, drawing, or design.

Education 304 The Part-Time School

Prerequisite: Junior Standing

A general acquaintance course in the philosophy, organization, and administration of vocational and adult education for the out-of-school group. The following points are considered: history and development of the part-time school, both in Europe and

America, with special attenion given to Wisconsin; Federal and State laws affecting the part-time schools; the type of pupils in the part-time schools and their needs; desirable characteristics of the part-time school teacher; the work of the coordinator; home contacts; cooperation with outside organizations; cooperation with the Industrial Commission and Rehabilitation Division; the planning and care of equipment.
Sem. I, II, and S.S.
Miss Johnson Credit: 2

Education 401 Vocational and Educational Guidance

The rise and development of the movement, with some attention to foreign progress; Study of surveys and their application to the problem; analysis and evaluation of the use of intelligence and trade tests; careful consideration of personal functions and administration, in education, business, and industry; and preparation and classification of occupational information for use in guidance and placement. Assigned reading, lectures, and preparation of term papers.
Sem. I, II, and S.S.
Mr. Brown Credit: 2

Education 407 Teaching Trade and Industrial Subjects in the Part-Time School

Recognized principles of teaching applied to typical shop situations as found in the part-time school. Methods of teaching based upon the psychological aspects of learning as applied to both shop and related subjects. Topics considered are (1) the use of the lesson plan and the job sheet; (2) the demonstration, both for the whole class and for the smaller group; (3) individual practice, the follow-up on the demonstration; (4) assignment of reading and observation; (5) the notebook and note taking; (6) the lecture or class talk; (7) reports by pupils; (8) questioning; (9) checking and testing, examinations; (10) the use of models, charts, graphs, and diagrams; (11) the use of pictures of various kinds; (12) shop hygiene and safety; (13) management, routine, details, and discipline; (14) tool room procedure; (15) the maintenance of tools, apparatus, and equipment; and (16) the selection, care, and purchase of supplies.
S.S.
Credit: 2

Education 443 Problems in Teaching Trade and Industrial Subjects in Wisconsin Schools of Vocational and Adult Education

Prerequisites: For Junior Teachers (Wisconsin State Board of Vocational and Adult Education), three years of teaching experience in the part-time trade and industrial classes of the Wisconsin vocational schools, and the completion of two years of training in an approved institution of college rank. Equivalent experience for teachers from other states. Education 459.
Individual work representing approved practice in the writing of text material that can be of immediate use in part-time classes. The writing of specific instruction sheets and the preparation of test material suitable for use in part-time classes.
S.S.
Credit: 2

Education 413 The Teaching of Homemaking in the Part-Time School

Formulation of objectives based upon the personal needs of the vocational school girl; suitable methods adapted to the part-time school pupil and the adult homemaker.
Sem. I, II, and S.S.
Miss Johnson Credit: 2

Education 502 Supervision of Industrial Arts Education

Prerequisite: Graduate standing.

The course is organized primarily for industrial arts teachers. Basic principles of supervision based on national surveys are applied to the field of industrial arts. Supervisory functions are analyzed and detailed as to their applications in the field. Practical problems in the use of supervisory devices for the improvement of instruction are a required part of the course.
S.S.
Mr. Wigen Credit: 2

Education 503 Preparation of Instructional Material (Plans II)

Prerequisite: Graduate Standing.

Survey of published material now available in published form. Identification and adaptation of instructional material for use in course organization and curriculum building in the present range of situations in industrial education. Approved principles, methods and techniques employed in the preparation of materials of instruction. Advanced problems assigned in the construction of units, courses, and curricula in the field of the individual's interest and experience.
S.S. Credit: 2
Mr. Brown

Education 463 Industrial Arts Education Workshop

Prerequisites: Senior undergraduate standing, graduate standing, or experience in teaching or in industry.

Through individual and group assignments a flexible series of opportunities will be available to work out practical teaching problems in selections from the following areas of professional preparation; Preparation of Instructional Material; Planning Teaching Methods; Shop Management; Securing and Handling of Supplies; Defining and Keeping of Records; Identification and Analysis of Instructional Content. The problems and required reports will be in terms of specific situations so far as it is possible. Group studies will be made of demonstration teaching, representative shop lay-out, and typical shop personnel plans under varying instructional requirements.
S.S. Credit: 2
Mr. Brown, Mr. Wigen, and others.

Education 403 Trade and Industrial Education Workshop

Prerequisite: Senior undergraduate standing, graduate standing, or experience in vocational teaching or industry.

Through individual and group assignments a flexible series of opportunities will be available to work out practical teaching problems in connection with the teaching of trade and industrial subjects in vocational and adult education schools. The credit in this "workshop" will be supplementary to classification courses and will not be substituted in lieu of cassification courses. The problems worked out by the students will be specifically practical. Definite standards of practicability will be set up which must be met in order to secure credit. Efforts will be made to group students in small groups where the common factors in their individual problems makes grouping possible. Progress reports will be made from time to time by individuals and small groups, especially on those phases of problems which have a Significance in common with all the members in the work shop group. Typical areas of professional preparation would be: Adaptation of Instructional Material to Specific Requirements; Identification and Analysis of Instructional Content; Shop Management and Records; Demonstration Procedures; Shop Lay-outs. The maximum amount of credit which may be completed in three weeks in the Trade and Industrial Education Workshop will be two semester hours. If the student is able to identify and define satisfactory problems, the student may if he so desires take a maximum of four semester hours in the Trade and Industrial Education Workshop by taking two three week periods of work. The workshop is planned to be of specific assistance in maintaining strong and adequate instruction in the various phases of trade and industrial work meeting the many problems of volume, urgency, and changing content.
S.S. Credit: 2 or 4

English 102a Freshman English Composition

Required of all freshmen. The course is designed to give the incoming freshmen competence in grammatical analysis and correctness, punctuation, mechanics, and the beginnings of logical organization of material. A competence test in spelling is partial requirement for passing.
Sem. I, II. Credit:3
Miss Callahan, Miss Nielsen

English 102b Freshman English Composition

Prerequisite: English 102a.

Required of all freshmen. The course is designed to add to the freshman's competence in grammatical and mechanical accuracy the principles and practice of rhetorical effectiveness in writing, through increased vocabulary, variety of sentence structure, and varying modes of presentation of material. A competence test in vocabulary is partial requirement for passing. Attention is also given to reading.
Sem. II. Credit: 3
Miss Callahan, Miss Nielsen

English 216 Survey of English Literature

Required of all students classified beyond the sophomore level. An introduction to English literature from Beowulf to the end of the nineteenth century. Readings, reports, lectures, class discussions.
Sem. I, II. Credit: 2
Miss Callahan, Miss Nielsen

English 346 Expository Writing

Prerequisite: English 102a, English 102b, English 106.

Required of all students classified above the freshman level. Training in the organization and description of knowledge attained in other courses. The course includes an investigative term paper, with practice in bibliography, sources of material, logical organization, and footnotes.
Sem. I, II. Credit: 2-3
Miss Callahan, Miss Nielsen

English 402 Fiction

Prerequisite: English 216.

Reading and analysis of early prose fiction to the modern novel. Accumulative experience through the ages is important in the development of any culture and therefore chronology is stressed as well as analysis.
Sem. I, II. Credit: 2
Miss Nielsen

English 404 Poetry

Prerequisite: English 216.

A further study of the principles of poetry; intensive and wide reading by types rather than by chronology.
Sem. I, II. Credit: 2
Miss Callahan

English 406 Drama

Prerequisite: English 216.

A study of the principles of dramatic literature, with intensive reading of a few great types and wider reading of other plays, regardless of time of composition or national origin. Emphasis upon Shakespeare.
Sem. II. Credit: 2
Miss Callahan, Miss Nielsen

English 106 Speech I

Required of all freshmen. Practice in the elements of effective speaking before a class, with criticism from the instructor.
Sem. I, II. Credit: 2
Miss Erickson

English 223 Speech II

Prerequisite: English 106.

Required of all men; elective for women. Principles of rhetoric applied to the spoken code, with emphasis upon the ideas to be communicated. Parliamentary procedure, propaganda analysis, group discussion.
Sem. I, II. Credit: 2
Miss Erickson

English 444 Play Production

Elective for juniors and seniors. A study of the techniques of all aspects of play production, including selection and cutting of plays, directing, acting, make-up, costume, lighting, and stage equipment.
Sem. II. Credit: 2
Miss Erickson

MATHEMATICS

Mathematics 209 College Algebra

Fundamental processes and selected work in college algebra, including special work in logarithms and the slide rule. Special efforts are made to give each student his maximum progress.
Sem. I, II. Credit: 4
Mr. Rich, Mr. Tustison

Mathematics 213 Trigonometry

Prerequisite: Mathematics 209.

Introduction to the elements of trigonometry. The solution of the right triangle. Variations of the trigonometric functions, the fundamental relations and functions of the sum and difference of angles. The solution of the oblique triangle. Slide rule and logarithmic calculations using the trigonometric functions in solving practical problems. One field problem in the use of the sextant or the transit.
Sem. I, II. Credit: 3
Mr. Rich, Mr. Tustison

Mathematics 216 College Geometry

Prerequisites: Mathematics 209 and 213; or consent of the instructor.

This course may be called a college course of "Geometry in Action", covering the view points as taken by projective geometry, descriptive geometry, and metrical geometry. The course includes the study and use of linkage instruments to facilitate a thorough understanding of the subject material that is given. It is closely correlated with the work as a whole in Industrial Education.
Sem. I. Credit: 2
Mr. Rich

Mathematics 217 Elements of Navigation

Prerequisites: Mathematics 209, 213, or consent of the instructor.

The study and use of maps and charts. Instruments commonly used. Navigation by dead reckoning. Radio navigation. Use of computers, graphs, and tables. The C.A.A. prescribed work in Navigation will be used as a guide in this course.
Sem. I, II. Credit: 2
Mr. Price

Mathematics 314 Analytic Geometry

Prerequisites: Mathematics 209 or 213.

Algebraic treatment of geometry. A graphical analysis of the straight line, the circle and conic sections in general.
Sem. II. Credit: 2
Mr. Rich

Mathematics 315 Calculus

Prerequisites: Mathematics 209, 213, and 314; or consent of the instructor.

A course of differential and integral calculus with practical application. A year's course, 2 hrs. each semester.
Sem. I, II. Credit: 4
Mr. Rich

MUSIC

Music 150 Solfeggio

The study of solfeggio, which includes ear training, is the foundation of musical education. Such fundamental principles as rhythmic notation, measure, three against two, tonal notation and relations, intervals and inversions, diatonic and chromatic scales, signatures, and rhythmic and melodic dictation are studied.
Sem. I. Credit: 1
Mr. Cooke

Music 151 Harmony 1a

Prerequisite: Music 150.

A detailed study of chord construction. All triads in major and minor modes, and dominant sevenths and their inversions. Dispersed harmony. Keyboard work and the playing of cadences.
Sem. II. Credit: 1
Mr. Cooke

Music 152 Harmony 1b

Prerequisite: Music 151.

Introduction to counterpoint; passing tones; contrapuntal treatment of the harmonic material of Harmony 1a. Harmonization of scales and simple melodies at the keyboard.
Sem. I. Credit: 1
Mr. Cooke

Music 153 Introduction to and Appreciation of Music

The course deals with the fundamentals of the art including form, harmony, instrumentation and history. Presentation is through illustration and recordings.
Mr. Cooke Credit: 1

Music 160 Theory

Prerequisites: Music 151 and 152.

Acoustics; musical terminology; notation; ornamentation; the Gregorian modes; description of the orchestral instruments; analysis of music forms, including the song forms. Also practical work in elementary orchestration. This course summarizes the knowledge necessary to every teacher and professional musician.
Sem. I. Credit: 1
Mr. Cooke

Music 162 Conducting

Prerequisites: Junior standing. Participation in at least one of the musical organizations of the college.

Technique of conducting. Chorus and orchestra from viewpoint of prospective conductor. Principles of interpretation. Score reading and transposition. Care and classification of voices.
Sem. II. Credit: 1
Mr. Cooke

Choral Organizations

Membership in the glee club is open to all students. Try-outs are held at the beginning of the school year, and a waiting list provides opportunity and protection for those desiring admittance at a later date. Strict training is provided in the fundamental principles of choral singing through sectional as well as The Symphonic Singers, the a cappella choir consisting of sixty voices selected from the Glee Clubs, sing two formal concerts at home each year as well as making a Spring tour. This organization has been heard several times over CBS and NBC.

Music 164 Men's Glee Club

The Men's Glee Club.
Full year. Credit: 1
Mr. Cooke

Music 165 Women's Glee Club

The Women's Glee Club.
Full year. Credit: 1
Mr. Cooke

Music 166 The College Band

Membership in the college band is open to all students who have had training and experience in the playing of a band instrument. The band not only presents formal concerts, but plays for all athletic events. The Coed Band of twenty-five members performs for special occasions and at basket-ball games. (No credit allowed if credit has already been given in orchestra)
Full year. Credit: 1
Mr. Cooke

Music 167 The College Orchestra

The orchestra is an organization of twenty-five members with symphonic instrumentation. Rehearsals are held once a week and special attention is given the string section in private rehearsals. This organization makes public appearances on and off the campus, and provides the accompaniment to the larger choral works presented by the combined glee clubs.
(No credit allowed if credit has already been given in Band)
Full year. Credit: 1
Mr. Cooke

PHYSICAL EDUCATION AND COACHING

Physical Education 127 Physical Education I (Men)

Wide range of free exercises, calisthenics, floor work, and games. In season, work in athletics. Physical efficiency tests to determine individual improvement. Individuals will conduct classes in Physical Education. Life saving tests to qualified individuals who desire Red Cross certificates.
Sem. I, II. Credit: 1
Mr. Johnson (0-2)

Physical Education Intramural Sports (Men)

A complete program of all sports in season consisting of an "Athletics for All" aim.
Mr. Johnson

Physical Education 263 Basketball Coaching

Prerequisite: Physical Education 127 (9 weeks).

Instruction in individual and team fundamentals: Passing, goal throwing, dribbling, turns, stops, special drills, etc. Team play: Styles of offense and defense used by the leading coaches. Problems of organization and administration: Schedules, training, selection of material, and the purchase and care of equipment.
Sem. I, 2nd quarter; Sem. II, 3rd quarter. Credit: 1½
Mr. Johnson (2-2)

Physical Education 265 Football Coaching

Prerequisite: Physical Education 127 (9 weeks).

Instruction in individual and team fundamentals: Tackling, blocking, kicking, passing, special drills, etc. Team play: Styles of offense and defense used by the leading coaches. Problems of organization and administration: Schedules, training, selection of material, and the purchase and care of equipment.
Sem. I, 1st quarter; Sem. II, 4th quarter. Credit: 1½
Mr. Johnson (2-2)

Hygiene 101

Hygiene of the teacher, pupil and curriculum. Personal hygiene problems of teacher and pupils. Survey of school buildings, grounds, heating, lighting, ventilation, safety and janitorial methods. Survey of hygiene of food, water, air, climate, sewage disposal, common communicable and non-communicable diseases, and vital statistics. First aid and emergency treatment of common accidents and injuries. Safety education and precautions. Detection of physical defects and remedial measures.
Sem. I, II. Credit: 1
Mr. Johnson

Physical Education 128 Physical Education I (Women)

First year physical education is planned to meet the needs of the women students. Careful observation shows that these are along the lines of personal development, present recreation, and training for future recreation.

Four quarters of physical education are required of each freshman woman. One of these quarters must be given over to a course called "Health and Posture Training." One other activity required of each girl is swimming. These two courses may be taken at any time during the first year. The first and fourth quarters should be utilized for outdoor work.

The activity during the remaining two quarters may be selected by the students according to their interests and abilities. The activities from which they may choose are as follows: Field hockey, tennis, archery, basketball, volleyball, bowling, folk dancing, kittenball, badminton, deck tennis, and shuffleboard.

The women differ so much in their ability in swimming that the work is given in separate classes to beginner, intermediate, and advanced groups.
Sem. I, II. Credit: 0
Miss Antrim (-2)

Physical Education 228 Physical Education II (Women)

Sophomore women take four quarters of physical education but only one of these is a requirement, swimming. This is an unusually good activity for the development of health and beauty of form. It exercises all the muscles equally well and leads to later enjoyment and continued activity.

Each girl is urged to select one other individual sport such as tennis, golf, bowling, or archery to be used as a hobby during the junior and senior years.

Each individual is also encouraged to take at least one quarter of an activity in which team play is necessary. All should develop the social principles of working as a team unit.

So many electives allow for variations in interests and abilities and in most cases lead to a higher standard of work.

The electives for the sophomores are: Field hockey, tennis, archery, basketball, volleyball, bowling, dancing, kittenball, badminton, deck tennis, and shuffleboard.
Sem. I, II. Credit: 0
Miss Antrim (-2)

Physical Education 380 Theory and Principles of Physical Education for Women Teachers

Prerequisite: Physical Education 128.

A course for women who wish to teach physical education in connection with other subjects. It is a careful study of the aims and objectives of modern physical education as applied to work in schools, camps, and supervised playgrounds. The material includes formal and informal methods of teaching, the presentation of

the varied new physical education programs, the related purpose of physical examinations and personal hygiene, a study of the organization and administration of gymnasiums, playgrounds, recreation centers, swimming pools. Seasonal programs adapted to groups of various ages are formulated for indoor and outdoor work.
Sem. I, II.
Miss Antrim
Credit: 2
1 hr. lecture, 2 hr. lab.

Physical Education Correction Individual Gymnastics

Special diagnosis and prescription of exercises for correction of minor physical deficiencies which are noted at the time of the physical examination by the college physician. In this class, each student is considered as an individual, special case. It is primarily for those who wish to improve their posture, overcome detriments to their health, e.g., weak arches, weak abdominal muscles, indigestion, constipation, overweight, underweight, poor circulation, sleeplessness, weak heart, etc. A silhouettograph camera helps to determine and verify posture needs, preceeding corrective work.
A corrective room in the gym has been especially equipped with a triple mirror, mats for exercise, beds for students who need regular rest and relaxation periods to build up reserve strength and vitality for better health and efficiency.
Sem. I, II.
Miss Antrim
Credit: 0
Hours arranged

Physical Education Recreational Sports (Women)

The Women's Athletic Association sponsors various sports which promote interest and enthusiasm in recreational activities and intramural competition. There is created an opportunity for every girl in school to participate in various recreational activities, and in "play for play's sake."
In the list of fall interests, a girl may choose field hocky, archery, tennis, or organized hiking. Winter diversions include volley ball, basketball, bowling, shuffleboard, deck tennis, life saving methods, swimming, diving, ice skating, and badminton. Spring activities include archery, tennis, and kittenball. At least one afternoon a week the swimming pool is open for women. Two evenings a week they may use the gym floor for recreational activities and intramural sports.
Miss Antrim

NATURAL SCIENCES

BIOLOGY

Biology 122 General Biology

Study of living things, their structure and organization, metabolic processes, behavior, reproduction, and their relationship to their environment and to each other.
Sem. I.
Miss Marshall
Credit: 3
(1-4)

Biology 214 Physiology and Anatomy

Man's place in the biological world; human anatomy based on dissection of the cat and other laboratory material; fundamental physiological processes of all the organ systems; embryological development and inheritance of man.
Sem. I, II.
Miss Marshall
Credit: 5
(2-6)

Bacteriology 206 General Bacteriology

Morphological and physiological characteristics of yeasts, molds and bacteria; methods used in culture and identification; introductory studies in bacterial analysis of water, milk and other problems in sanitation; food bacteriology.
Sem. II.
Miss Marshall
Credit: 3
(1-4)

Biology 316 Zoology

A survey of the animal field with emphasis on classification, ecology, and evolution and other general subjects. Special consideration is given to parasites and any other groups which are economically important to man.
Sem. I.
Miss Marshall
Credit: 3
(2)

Biology 442 Community Hygiene

Fundamentals of health, control of communicable disease, preventative medicines, public health programs, etiology of disease. Pathological bacteriological, and immunological aspects emphasized. Operation of national and state health laws.
Sem. I.
Miss Marshall
Credit: 2-3
(2)

Biology 362 Advanced Physiology

Prerequisite: Biology 214, Chemistry 115.

Histological and quantitative studies on human blood, experiments on frog and turtle hearts and on muscle-nerve preparations of the frog. Experiments on human body.
Sem. II.
Credit: 3
(1-4)

Biology 432 Heredity and Eugenics

A study of laws of inheritance and means for improvement of the human race.
Sem. I.
Credit: 2-3
(2)

CHEMISTRY

Chemistry 115 Inorganic Chemistry

Chemical viewpoints, laws, principles and atomic structure as related to chemical reactions. The study of non-metals is followed by that of metals. A constant effort is made to relate material taught to the needs of Home Economic majors. Experiments are selected as far as possible and practical to assist in such applications. For the Industrial Arts majors, the needs arising from the present war and industrial operations are stressed at all times.
Sem. I, II.
Miss McCalmont, Miss Cox
Credit: 5
(2-6)

Chemistry 208 Organic Chemistry

Prerequisite: Chemistry 115.

Influence of structure on chemical behavior; isomerism; the study of hydrocarbons, alkyl halides, alcohols, ethers, aldehydes, ketones, acids, esters, fats, soap, carbohydrates, cellulose and rayon, nylon, plastics, proteins, alkaloids, synthetic drugs, and vitamins. Appreciations in related organic chemistry are sought by promoting an understanding of the changes involved in cookery, nutrition, laundry, cleaning and other household processes. Emphasis is placed upon the important relationships of organic chemistry to industrial processes in the manufacture of rayon, nylon, petroleum products, plastics and other important commercial substances and upon the synthesis of dyes, drugs and vitamins.
Sem. I, II.
Miss Cox
Credit: 4
(2-4)

Chemistry 322 Biochemistry

Prerequisites: Chemistry 208, Biology 214.

Study of colloids; of proteins and protein digestion products; of the intermediary metabolism of carbohydrates, fats, and proteins in the animal body. Qualitative and quantitative determinations of the end-products of metabolism. Nutritional significance of minerals and vitamins.
Sem. I, II.
Miss Cox
Credit: 3
(1-2)

Chemistry 445 Chemistry of Materials

Needs of the members of the class shape the trend and emphasis to be placed. At present, the topics most valuable are: Rubber, natural and synthetic, fuels and lubricants as applied to use in all kinds of machines, and metals both ferrous and non-ferrous. At the same time an effort is made to aquaint students with subject matter directly necessary to understanding Industrial Arts problems.
Sem. II.
Miss McCalmont
Credit: 3
(2-2)

PHYSICS

Physics 421 Physics I

Electricity. Mechanics. Heat. Practical applications of general physical laws is stressed in special laboratory problems, or demonstrated by apparatus or machines in actual use. Content applicable to the needs of prospective teachers in industrial education, home economics, or the sciences.
Sem. I, II.
Mr. Tustison, Mr. Rich
Credit: 5
(3-4)

Physics 423 Physics II

Prerequisite: Physics 421

Sound and light, a continuation of Physics I, completing the study of the general laws of Physics. The subjects are covered through lecture and related laboratory work. Content is especially adapted to prospective teachers of physics and general science.
Credit: 3
Sem. I, II. (2-2)
Mr. Tustison, Mr. Rich

Physics 425 Physics III

Prerequisites: Physics 421 and 423, Mathematics 207.

Strength of materials and the materials of construction in machine and building trades. Problems in wood, steel, and concrete construction. Standard and special tests in various grades of iron and steel; building materials such as cement, brick, and woods of various kinds, glues, screws, nails, and other fasteners.
Credit: 3
Sem. I, II. (2-2)
Mr. Good

Physics 219 Physics V Elements of Meteorology

Prerequisites: Sophomore classification, Mathematics 209, 213.

An elementary ground school course giving specific training in the fundamentals of meteorology. It covers the meteorological elements visually and instrumentally observed: namely; state of wind direction and velocity, ceiling, and precipitation. The purpose is to develop proficiency in the technique required in conjunction with elementary flight training. The C.A.A. prescribed work in meteorology will be used as a guide in this course.
Credit: 2
Sem. II.
Mr. Good

SOCIAL SCIENCES

Social Science 201 General Economics

A study of business organization, production, how prices are determined, distribution, the influence of government on business, public utilities, money and banking, public finance, labor organization.
Credit: 3
Sem. I, II.

Social Science 215 Origins and History of World War II

Prerequisites: Junior or senior undergraduate standing, graduate standing, or equivalent experience.

This course aims to aid the student in an understanding of the backgrounds and development of the present war. A brief survey will be made of the rise of the Fascist governments of Hitler and Mussolini, the foreign policies of the major European states, and the relations of Japan and China to the western world. American foreign policies and the organization of the government on a war basis will be reviewed. The class will study the progress of the war from its beginnings to the present and emphasis will be given to current developments. Attention will be given to the plans for a just and durable peace.
Credit: 2 or 3
Sem. I, II.
Mr. Stephan

Social Science 301 Economic History of the United States

Prerequisite: Social Science 201.

A study of the economic evolution of the United States since colonial times. Approximately two-thirds of the course is devoted to the period since the Civil War. A special emphasis is placed on the development of economic problems and the foundations of modern Industry.
Credit: 3
Sem. I, II.
Mr. Price

Social Science 309 General Sociology

A study of the social heritage; the interdependence of the individual and the group; the influence of group association on the individual's behavior; collective behavior in typical groups of crowds, publics, classes, castes, races; community and social organization; social processes.
Credit: 3
Sem. I, II.
Mr. Stephan

Social Science 311 Government

Prerequisites: Social Science 201, 309, or consent of instructor.

A basic course intended to give the student a background of fundamentals. The emphasis will be placed on principles, processes, and problems. The treatment of institutions will be functional; but where there are separate political entities to be considered, they will be analyzed. Approximately half of the time will be devoted to a review of the American governments. Throughout the course, the comparative approach will be used.
Credit: 3
Sem. I, II.
Mr. Price

Social Science 326 Problems of the Family

Study of social problems of family life. Special emphasis on development and maintenance of satisfactory family relationships. Should parallel Home Economics, Education 424, Social Science 309.
Credit: 3
Sem. I, II.
Miss Michaels and others

Social Science 409 Recent History of U. S.

Prerequisite: Social Science 103.

A study and interpretation of American history since the Civil War. Emphasis is put on those developments which best help to explain present United States conditions. Some time is devoted to the study of recent world problems in which the United States has played a part.
Credit: 3
Sem. II.
Mr. Shafer

Social Science 414 Labor Problems

A study of the problems of the worker in modern industry, backgrounds of labor movements, current union organization and practice, labor and management relations, collective bargaining, and the causes and proposed solutions of such typical problems as unemployment, wages, hours, political activity, and government and labor relations.
Credit: 3
Sem. II.
Mr. Stephan

Social Science 417 American Politics

Prerequisites: Social Science 103, 105.

Analysis of modern political parties, nominating methods, campaigns, elections, practical politics in legislative bodies, machines and bosses, and other divisions of present day American politics. Reforms and remedies for existing political malpractice are critically examined.
Credit: 2-3
Sem. I.
Mr. Price

Social Science 407 History of the Americas

Prerequisites: Social Science 201, 309, or consent of instructor.

The objective in the course is an understanding of the backgrounds of American history in hemispheric relationships. While the basic emphasis will be upon the history of the United States of America, since it is a more familiar point of departure, the ultimate goal is to provide a setting for the student's thinking that gives horizontal and vertical perspective; a breadth of scope that will include Canada and the Latin Americas, and a depth that will suggest Occidental and Oriental influences.
Credit: 4
Sem. I, II.
Mr. Price

Social Science 410 Modern World

Prerequisites: Social Science 201, 309.

A course concerned primarily with direction-pointing movements in the world's history which have influenced and shaped the society in which we live. The objective is to provide an understanding of historical "patterns" which will aid the student in evaluating modern trends in terms of historic backgrounds and provide a frame of reference for interpreting the contemporary world.
Credit: 4
Sem. I, II.

Social Science 430 Problems of American Society

Prerequisites: 9 hours in social science to include General Economics and General Sociology.

A study of the tensions in American life, the major economic, social, and governmental problems which need to be understood, interpreted, and analyzed for effective

living in American democratic society. An attempt will be made to have the student study and participate in the development of solutions for these problems. It is planned to utilize the resources of all members of the social science department in this course.
S.S. (Not offered during year 1944-45) Credit: 3
Mr. Stephan and others

HOME ECONOMICS

ART

Art 106 Fundamentals of Design

A basic course necessary for the pursuance of further art courses. Major stress is laid upon the elements of design—line, shape, form, texture and color. This is a sensitizing course that aims at the development of the student's ability to discriminate visually; at teaching him how to see. Lettering, layout, color charts, abstraction and realism are factors in the course.
Sem. I, II. Credit: 3
Miss Farnham, Miss Carson (-6)

Art 220 Clothing Selection

Personal factors which influence the selection of dress for the individual. Application of art principles to clothing.
Sem. I, II. Credit: 2
Miss Jeter, Miss Van Ness

Art 332 Advanced Design

Prerequisite: Art 106

Further acquaintance with form and composition by means of adventures in charcoal drawing, sculpture and painting. Color vs. form—how color can create form. Study of the function of surface decoration. A transitional course for imparting adaquate design background and greater confidence before the student goes on to building crafts objects or constructing paintings.
Sem. I, II. Credit: 2
Miss Farnham (-4)

Art 206 Art Appreciation

A lecture course designed to impart a basis for judgment in regard to all visual things, as well as an understanding of the scope of art, the relationship of the arts to one another, and the universality and inevitability of the arts. General and large concepts, painting, sculpture, architecture, the interior, and various art ideas are considered. Visual aids and at least one journey to the Minneapolis galleries are utilized.
Sem. I, II. Credit: 2
Miss Farnham (2-)

Art 334 House Furnishing

A study of the housing and house furnishing needs of the family as they relate to beauty, health, privacy, convenience, economy and leisure time activities in the home.
Sem. I, II. Credit: 3
Miss Carson (1-4)

Art 323 Problems in House Furnishing

Prerequisite: Art 334.

A course in which curtains, slip covers, upholstered stools, and other articles for the house may be planned and made, and furniture reconditioned.
Sem. I, II. Credit: 2
Miss Carson (-4)

Art 400 Crafts

Prerequisite: Art 106.

The creative building of visual things with stress upon fine original design. A beginning is made in several crafts: weaving, pottery, leather-craft, and one or two others.
Sem. I, II. Credit: 2
Miss Farnham (-4)

Art 430 Art History

Survey of the fine arts in the most significant historic periods with emphasis on contemporary work. Visits to museums and galleries.
Sem. I, II. Credit: 2
Miss Carson

Art 436 Clothing Design

Prerequisite: Home Economics 218.

Study of advanced problems of clothing design.
Sem. II. Credit: 2
Miss Van Ness (1-2)

Art 446a, b Sketch

A study of the essentials of form, light-dark, and color with emphasis on composition. Sketching in pencil, charcoal, and water color.
Sem. I, II. Credit: 1
Miss Farnham (-2)

Art 460 Advanced Crafts

Prerequisite: Art 400.

Experiences with the various art and craft media. The first week to ten days will be given over to "get acquainted with your material" experiments in which demonstrations and student manipulation of various creative media will be emphasized. After a discovery of the medium best suited to the individual, the remainder of the time will be given to concentration on that particular medium for creative work.
Sem. I, II. Credit: 2
Miss Farnham (-4)

FOODS AND NUTRITION

Home Economics 112 Principles of Nutrition

Parallel: Home Economics 114.

This course emphasizes the maintenance of health through desirable food selection, habits, and health practices. Planned to help the freshmen with health and nutrition problems.
Sem. I, II. Credit: 2
Miss Cruise, Miss Buchanan, Miss Rogers

Home Economics 212 Family Nutrition

Prerequisites: Home Economics 112, 114.

A scientific study of the fundamental principles of human nutrition as a basis for the selection of food for the individual and the family group. Consideration of child feeding.
Sem. I, II. Credit: 3
Miss Cruise (1-4)

Home Economics 114 Food Preparation

Parallel: Home Economics 112.

A study of basic principles in the preparation of foods, and of simple table service.
Sem. I, II. Credit: 2
Miss Rogers, Miss Buchanan, Miss Cruise (-4)

Home Economics 230 Foods

Prerequisites: Home Economics 112, 114.

This is a continuation of food preparation studied in Home Economics 114. Application of scientific principles to cookery processes; analysis of basic recipes; establishment of good standards for food products.
Sem. I, II. Credit: 3
Miss Buchanan (1-4)

Home Economics 308 Meal Management

Prerequisites: Home Economics 230, 212.

A study of dietaries planned to meet nutritional requirements at different income levels and in keeping with the food rationing regulations. Meal preparation planned in accordance with these dietaries including serving problems and food costs will be given due consideration.
Sem. I, II. Credit: 3
Miss Rogers (-6)

Home Economics 438 Experimental Foods

Prerequisites: Home Economics 230.

The course involves the solving of cookery problems from the scientific viewpoint. Its primary purpose is to increase students' knowledge of foods by having theories tested through the preparation of foods under controlled conditions, observations checked and recorded, results summarized. Special emphasis will be placed on the study of problems relating to conservation and substitution of food materials.
Sem. I, II.
Miss Rogers

Credit: 3
(-6)

Home Economics 400 Food Demonstrations

Prerequisites: Home Economics 230, 308.

Instruction in the technique of food demonstration, planning and giving demonstrations for different groups; lecture demonstrations by specialists from commercial fields.
Sem. I, II.
Miss Buchanan

Credit: 2
(-4)

Home Economics 456 Special Food Problems

Prerequisite: Home Economics 438.

Directed individual work. Involves an extensive study of principles and applications of research methods as applied to food problems. Intensive literature review of problems undertaken.
Sem. I, II.
Miss Rogers

Credit: 2-3
(4-6)

Home Economics 310 Nutrition and Dietetics

Prerequisites: Home Economics 212, Chemistry 322 (May parallel).

Aims to extend the students' knowledge of the science of nutrition involving digestive and metabolic processes and products. Practical dietary programs suited to changing times and circumstances. Also work with oxycalorimeter.
Sem. I.
Miss Cruise

Credit: 3
(2-2)

Home Economics 418 Diet in Disease

Prerequisites: Home Economics 310, Physiology 362.

Abnormal nutrition with dietary treatment of certain diseases; experiments and problems with respiratory apparatus, calorimeter and laboratory animals.
Sem. II.
Miss Cruise

Credit: 3
(2-2)

Home Economics 300 Applied Institution Management

Prerequisites: Home Economics 308.

Students prepare and serve meals in the college tea room under the direction of a student manager. Special emphasis is placed on meal planning, recipe selection, the most economical use of materials and time, dining room management, food preparation, and cost control. Different institution management problems are discussed.
Sem. I, II.
Miss Hadden

Credit: 3
(1-4)

Home Economics 328 Institution Administration

Prerequisites: Home Economics 452 and 300.

A study of the organization and administration of the food service in various types of institutions such as hospitals, schools, and commercial establishments. The course includes personnel management problems, purchasing methods, the keeping of records and accounts, and housekeeping management.
Sem. II.
Miss Hadden

Credit: 3
(3-)

Home Economics 452 Institution Food Preparation

Prerequisites: Home Economics 230, 308.

The laboratory work consists of planning of meals for the institution, standardization of recipes, calculation of food costs, the operation and care of equipment, together with the preparation of food for the college cafeteria. The specific problems of food selection and preparation are discussed in the lecture period.
Sem. I.
Miss Hadden

Credit: 3
(1-4)

Home Economics 463 Institution Management Problems

Prerequisites: Home Economics 452 or 300 and Home Economics 328.

Directed individual work in selected problems of the institution. Laboratory work can be done in the college cafeteria and tea room.
Sem. I, II.
Miss Hadden

Credit: 2-3
(To be arranged)

Home Economics 402s The Demonstration in Foods Teaching

Prerequisites: Graduate or advanced undergraduate standing.

Course will be developed to aid teachers, commercial foods people and adult education leaders to see the value of demonstration experiences in their work, and to help them develop teaching aids of this type. Application of important food principles and newer methods and practices pertaining to food preparation will be demonstrated.
S.S.

Credit: 2 or 3

Home Economics 460 Teaching Nutrition and Health

This course is planned to meet the needs of home economics teachers who are interested in a more intensive study of nutrition and health problems.
S.S.

Credit: 2 or 3

Home Economics 462s Vitamin Studies

Prerequisites: Graduate or advanced undergraduate standing.

A course planned to acquaint students with recent research on vitamins and their relation to human nutrition.
S.S.

Credit: 2

Home Economics 531 Progress in Nutrition

Prerequisite: Graduate standing.

Investigations in the realm of biochemistry and nutrition have added so much new material that the ordinary home economics teacher cannot keep pace with it. This course offers a critical evaluation of some of the recent developments in the science of nutrition.
S.S.

Credit: 2

CLOTHING AND TEXTILES

Home Economics 102 Clothing

The course is planned with the view of integrating the various aspects of clothing. Emphasis on personal clothing problems and good standards of dress for college women. Fundamentals of clothing construction.
Sem. I, II.
Miss Jeter, Miss Van Ness

Credit: 3
(-6)

Home Economics 102x

Upon completion of Home Economics 102, students are required to do certain clothing construction processes until a predetermined degree of speed and accuracy in technique has been attained. This standard must be met in a practical test before registration in Home Economics 218.

Home Economics 218 Clothing Construction

Prerequisites: Home Economics 102, 102x

A study of family clothing with emphasis on personal and technical problems involved in selection and making of silk, rayon and wool dresses.
Sem. I, II.
Miss Jeter

Credit: 3
(1-4)

Home Economics 320 Advanced Clothing Construction

Prerequisites: Home Economics 102 or equivalent.

Opportunity to continue pattern study and plans of up-to-date construction processes will be provided. Individual needs and problems in the teaching field will be considered.
Sem. II.

Credit: 2 or 3
(4-6)

Home Economics 312 Applied Dress Design

Prerequisite: Home Economics 218.

Practical application of principles of costume design through planning and construction of garments by various techniques including draping. Emphasis on individuality in costume through appropriate use of line, proportion, color and texture. Field trip required.
Sem. II.
Credit: 2-3
(-4-6)

Home Economics 315 Textiles

Study of fibres, yarns, weaves, finishes and design as applied to the selection of clothing and household fabrics.
Sem. I, II.
Miss Van Ness
Credit: 3
(1-2)

Home Economics 314 Children's Clothing

A study of the problems involved in the selecting, planning, and making of children's clothing. Emphasis is placed on the relation of design to self development. Garments are designed and made for children who can be studied in the laboratory.
Sem. I.
Miss Jeter
Credit: 2
(-4)

Home Economics 322s Textile Problems

Prerequisites: Graduate or advanced undergraduate standing.

Study of investigations and new developments in the clothing and textile field with special reference to the application of textile findings in home economics classes at various levels.
S.S.
Credit: 2

Home Economics 514 Clothing Seminar

Changing emphasis in clothing courses to meet emergency situations. Problems involved in the selection, adaptation, and presentation of clothing subject matter to meet various conditions. Choice of problems based on needs and interests of individual students.
S.S.
Credit: 1-2

Home Economics 316 Clothing Economics

Prerequisite: Home Economics 317.

Buying points of clothing; evaluation of buying guides; study of clothing plans for good management of individual and family clothing.
Sem. II.
Miss Van Ness
Credit: 2

Home Economics 336 Clothing Problems

Investigation of problems in clothing with organization and presentation of results. Emphasis on problems which arise in the teaching of clothing; evaluation and preparation of illustrative material; practice in demonstration.
Sem. I, II.
Miss Jeter
Credit: 2
(1-2)

Home Economics 370 History of Costume

A study of the development of costume. Factors which influence change in fashion; qualities in style that make for lasting beauty; influence of the past on present-day costume.
Sem. I.
Miss Jeter
Credit: 2

FAMILY LIFE

FAMILY LIFE

Home Economics 116 Personal Development

Study of personal problems of freshmen women; emphasis on personality development.
Sem. I, II.
Miss Michaels
Credit: 2

Home Economics 226 Home and Family Life

Study of the many home conditions and family needs such as food and its service, textiles and their use, clothing, family income, activities and relationships as they affect family living.
Sem. I.
Miss Michaels
Credit: 2

Home Economics 317 Consumer Information

Study of motives in consumption; family income and expenditures; selection of commodities and services; buying and selling practices. Evaluation of consumer aids and investigation of local situations. Consideration of present day consumer problems.
Sem. I, II.
Miss Van Ness
Credit: 3

Home Economics 318 Health of the Family

A study of factors essential to health and physical development of adults and children, and of family responsibilities for the maintenance of health standards.
Sem. I, II.
Miss Trullinger
Credit: 2

Home Economics 403 Home Management

Prerequisite: Junior Standing.

Management of the family resources, time, energy, money and equipment. Emphasis on the social aspects and the adjustments of family life. Residence in the Home Management House for six weeks with the actual experience in the management of the house and the care of a young child.
Sem. I, II.
Miss Trullinger
Credit: 3

Home Economics 224 Growth and Development of the Pre-School Child

A study of the physical, mental, emotional and social development of the pre-school child. Emphasis is on positive habit formation.
Sem. I, II.
Mrs. Smith
Credit: 2

Home Economics 424 Guidance Practices with Pre-School Children

Factors involved in the physical, mental, emotional and social development of the pre-school child. Emphasis is on positive guidance practices.
Sem. I, II.
Mrs. Smith
Credit: 2

Home Economics 333 Household Equipment

A study of the selection, construction, operation and mechanical care of household equipment and its relation to the well being of the family group.
Sem. I, II.
Credit: 2
(1-2)

Home Economics 432 Economics of House Furnishing

Study of consumer house furnishing problems based on utilitarian, economic, aesthetic, and social values of household commodities. Quantity and quality budgets at different price levels. Visits to house furnishing markets.
Sem. I, II.
Miss Carson
Credit: 3

Home Economics 352 Housing

Social and economic aspects of housing in relation to family welfare. Rural and urban housing conditions with remedial and restrictive measures for housing evils. Costs of housing, relation of cost to family income, and methods of financing.
Sem. I, II.
Miss Carson
Credit: 2

Home Economics 468a Adult Education in Homemaking

Prerequisites: Graduate or advanced undergraduate standing.

Course deals with problems of promoting adult classes and the preparation of teaching materials.
S.S.
Credit: 1½

Home Economics 469s Organization of Adult Homemaking Classes

Prerequisites: Graduate or advanced undergraduate standing.

Philosophy of adult education; the organization of work; agencies contributing to the program and development of specific programs to meet individual needs.
S.S. Credit: 1½

Note: See Social Science 326 for Course in Problems of the Family.

INDUSTRIAL EDUCATION

SHOP WORK, DRAWING, AND DESIGN

All courses in this group are nine weeks in length, meeting daily. Due to the variation in the types of content included in these courses the following tabulation is given to indicate the time requirements for credits.

Figures in parentheses indicate hours in preparation:

1 period per week (2)	18 wks. 1 semester hour
2 periods per week (1)	18 wks. 1 semester hour
3 periods per week (0)	18 wks. 1 semester hour
6 periods per week (0)	9 wks. 1 semester hour
12 periods per week (0)	9 wks. 2 semester hours
10 periods per week (2)	9 wks. 2 semester hours

Industrial Education Orientation

(For Industrial Education Freshmen.)

Admission requirements, program operation, attendance regulations, credits, scholastic measurement. Analysis of characteristics of a good performance in shop or drawing courses, in professional courses, in academic courses, and as a teacher. Personnel problems in physical, social, and mental phases. Curriculum opportunities, professional requirements, trend in requirements in calls for teachers. Analysis of personal performances. Significance of choices available.
Sem. I. Credit: 0
Mr. Bowman, Mr. Price, and others Meets 1 hr. per week Sem. I

DRAWING

Industrial Education 121 Elements of Mechanical Drawing

Analysis of fabricated objects; recognition of elementary shapes; identification of elementary shapes through recognition of principles of construction; basic relations, basic type figures; representation of fabricated objects through the more commonly used methods of drawing; technical sketching; technical specification; glossary; historical; guidance factors.
Sem. I, II. Credit: 2
Mr. Green (2-6)

Industrial Education 234 Mechanical Drawing

Prerequisite: Industrial Education 121.

Application of the principles of mechanical drawing in the solution of advanced problems of representation, involving various construction materials and processes. Advanced problems in projections, intersections, revolutions, developments, etc.
Sem. I, II. Credit: 2
Mr. Green (2-8)

Industrial Education 130 Aircraft Drafting

Prerequisite: Industrial Education 121.

The layout of primary aircraft structures and characteristic details involving such problems as airfoil profiles, airfoil L. E. radius, angle of incidence, wing construction, elevator and stabilizer details, fuselage, landing gear, tubular structures, rigging details, engine mounting, and other typical problems.
Sem. I, II. Credit: 2
Mr. Green (2-8)

Industrial Education 226 General Drawing

Prerequisites: Industrial Education 118, 121.

The place of drawing in general education. Organization patterns, basic type figures, basic relations. Consumer relations. Typical problems involving the use of flow sheets, operation diagrams, simple survey and map making, comparative value charts, simple working drawings and other problems relating to general education.
Mr. Green Credit: 2 (2-8)

Industrial Education 228 General Drawing

Prerequisites: Industrial Education 121, 118.

This course is planned for those who wish to make contact with phases of drawing that have not been stressed in other drawing courses. Modern techniques are utilized and explained in light of teaching the drawing at various levels in high school or vocational school. A student is urged to concentrate on those shop techniques that he feels he needs in teaching. The organization of a teaching syllabus in drawing is prepared for a subject that will aid the student in his student teaching or out in the field. It is recommended that the concentration be in his chosen field if possible.
Sem. I, II. Credit: 2
Mr. Ray (2-8)

Industrial Education 227 Machine Drawing

Prerequisites: Industrial Education 121, 118, and one course from the metal work group.

A popular treatise on mechanisms using drawing as the principle medium of representation. Working drawings, flow sheets, operation diagrams.
Sem. I, II. Credit: 2
Mr. Green (2-6)

Industrial Education 229 Machine Drawing

Prerequisites: Industrial Education 227, Mathematics 211.

Analysis of motions—uniform, simple harmonics, uniformly accelerated and retarded; cams—plate, cylindrical; spur gears—spur and pinion—pinion and rack—annular; bevel gears; worm and worm wheel; computations; use of odontograph.
Sem. I, II. Credit: 2
Mr. Green (2-6)

Industrial Education 329 Machine Drawing

Prerequisite: Industrial Education 227.

Mechanical perspective by piercing points of visual rays. Angular perspective, parallel perspective. Use of measuring points, vanishing points of inclined lines. Special methods for determination of perspective of circles. Application of the principles of perspective in the free hand sketching of machine parts. Dimensioning perspective drawings.
Sem. I, II. Credit: 2
Mr. Green (1-8)

Industrial Education 433 Machine Drawing

Prerequisite: Industrial Education 329.

Considerations of design from standpoint of strength, use, operation, manufacture, tool manipulations, cost; computations; use of standard references; detailing; pictorial assembly; design of jigs; to mechanism of general interest and use.
Sem. I, II. Credit: 2
Mr. Green (1-8)

Industrial Education 118 Freehand Drawing

A study of the basic fudamentals involved in freehand drawing such as lines, circles, ellipses, geometric solids, freehand perspective, shade and shadows, still life, thumbnails, technical sketching, blackboard practice, pastels or crayon, pen and ink work. A term sketch is submitted at the end of the course.
Sem. I, II. Credit: 2
Mr. Ray (2-8)

Industrial Education 224 Freehand Drawing and Design

Prerequisite: Industrial Education 118.

This course is advanced freehand drawing and designing: a study of lettering and alphabets: monograms, trade marks, seals, book plates, ornamental signs, either in metal or wood, entrances, garden furniture, advertizing layouts, show card and

poster work; silk screen and stencil cutting, memory sketches required daily. Industrial arts design is stressed. Crayons and water color sketching.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

Industrial Education 231 Architectural Drafting

Prerequisites: Industrial Education 121, 118.

Basic elements in the planning and construction of residential buildings, frame and masonry, lettering, symbols, conventions, footings, foundations, sill construction, cornices, windows, stairs, fireplaces, and accessories. A preliminary study of drawing plans involving elevations, floor plans details and perspective rendered in pastel. Illustrated lectures on kitchen layouts, living rooms, dining roms, bathrooms, sleeping rooms, etc.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

Industrial Education 233 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231.

Preparation of preliminary sketches for the problem; a set of working drawings for a residence five or six rooms, costing $6,000 to $10,000 in frame or masonry, involving floor plans, elevations, details, perspective estimate, and specifications. Lectures on current style of residential architecture with slides. Study of kitchens, bathrooms, living rooms, bed rooms, basements, and recreational rooms, with colored slides. A term report and class discussion on some phase of current building practice. Prefabrication and its future. Desirable references in the field are stressed and selections of teaching material.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

Industrial Education 331 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231.

The student creates his own design following some definite style of his own choosing. Preliminary plans are prepared from which a model is made, landscaped, rendered, and photoghaphed. Model making, studies of uses in all proposed housing layouts, illustrative material through slides. Studies of current architectures including materials, substitutes, and preassembled units in housing.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

Industrial Education 431 Architectural Drafting

Prerequisites: Industrial Education 121, 118, 231, 331.

Orders of architecture, history of architecture, reports on assignments, contracts, heating and sanitation, business housing, and public buildings. Lectures on readings on architecture, past, present, and future. Study of architecture and its relation to human progress including significant factors in vocational guidance.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

Industrial Education 471 Architectural Drafting

Prerequisites: Industrial Education 231, 233, 331, 431.

Fundamentals of architectural design. Shades and shadows, coordinate planes, casting shadows, determination of shadows. Perspective drawing, types of perspective, classic orders, proportion, elementary principles of architectural rendering. Preparing thumbnail sketches of proposed buildings, and drafting elevations for study. Exhibition and rendered drawings of proposed layouts.
Credit: 2
Sem. I, II. (2-8)
Mr. Ray

ELECTRICAL WORK

Industrial Education 119 Industrial Electricity

Essentials of electricity including wire splicing, Ohm's Law experiments, cells and batteries, signal circuits, simple light and power circuits, house wiring, direct current lighting and power circuits, direct current generators and motors, practical applied problems.
Credit: 2
Sem. I, II. (3-4)
Mr. Good

Industrial Education 343 Industrial Electricity

Prerequisite: Industrial Education 119.

Magnetic circuits as applied to coils, motors, generators, and transformers. Insulation and insulators. Armature windings and winding projects. Mutual and self-inductance. Conduit wiring projects.
Credit: 2
Sem. I, II. (3-4)
Mr. Good

Industrial Education 345 Industrial Electricity

Prerequisites: Industrial Education 119, 343.

Theory and essentials of alternating currents. Shop problems dealing with alternating current measuring instruments, transformers, and various types of alternating current motors and generators and their accessories.
Credit: 2
Sem. I, II. (3-4)
Mr. Good

Industrial Education 347 Electricity (Radio)

Prerequisite: Industrial Education 119 (Essentials of Electricity) or equivalent.

Theory and fundamentals of radio communication circuits. Many standard circuits are set up and tested in the laboratory. Part of the class period will be devoted to code practice.
Credit: 2
Sem. I, II. (4-6)
Mr. Kranzusch

Industrial Education 357 Electricity (Radio Advanced)

Prerequisites: Industrial Education 347 or equivalent.

A continued study of radio communication circuits and power supplies. The class period will be devoted largely to shop and laboratory work.
Credit: 2
Sem. I, II. (8-2)
Mr. Kranzusch

GENERAL MECHANICS

Industrial Education 253 General Mechanics

Prerequisites: Industrial Education 121, 119, 115, 107, 109.

Selections of jobs typical for the content courses in home mechanics; practical mechanics; and simple mechanics. General education is made the basis for the major portion of the shop assignments. Because of its general character, much of the work is adaptable to courses set up for girls in these fields. Students, in addition to their mechanical work, are required to make solutions of problems of management necessary to the successful operation of the general shop. Bench and mechanical equipment affords excellent opportunity for work in projects in woodwork, plumbing, electricity, woodfinishing, sheet metal repairs, and bench metal work.
Credit: 2
Sem. I, II. (1-9)
Mr. Kranzusch

Industrial Education 365 General Mechanics

Prerequisite: Industrial Education 253.

Continuation of General Mechanics in additional and advanced problems. Problems of arts and crafts nature are added to the already varied program. This additional field lends itself to work of an extracurricular character. New fields of general mechanics nature are explored and original research in developing new problems is stressed. The informational as well as the manipulative content is covered.
Credit: 2
Sem. I, II. (10)
Mr. Kranzusch

Industrial Education 369 General Industrial Mechanics

Prerequisite: Sophomore standing or equivalent in technical sequence.

A general survey of the power, mechanics, and materials involved in the various types of industries and in the machines, appliances and mechanical devices used by the average citizen. With this survey of each industry a study is made of the history and development, sources of raw materials, methods of production and production control, labor conditions, government legislation, and economic significance.
Credit: 2
Sem. I, II. (3-4)
Mr. Good

Industrial Education 375 Industrial Mechanics

Prerequisites: Industrial Education 369 and junior or senior standing in technical sequence.

This is an advanced course in industrial mechanics operated very largely on an

individual assignment basis. Each member of the class is assigned or selects special phases in individual industries for more concentrated study. His findings are presented to the class for discussion and analysis. The purpose of these courses is to prepare teachers to develop the desire and ability of high school students to recognize and interpret mechanical and social change in our industrial life.
Sem. I, II. Credit: 2
Mr. Good (3-4)

METAL WORK

Industrial Education 242 General Motor Mechanics

A basic course in the study of the internal combustion engine and its application to units of transportation and stationary equipment. Information on the use of power and its subordinate units, as applied to travel by land, sea and air, and to stationary engines and equipment will be studied through the use of laboratory demonstrations and illustrative material. Assignments in report form will be emphasized.
Sem. I, II. Credit: 2
Mr. Kranzusch, Mr. Good (4-6)

Industrial Education 245 Auto Mechanics

Prerequisites: Industrial Education 113, 119.

Seven weeks to the study, repair, and adjustments of the various units of the chassis not including the engine, on live cars brought into the shop. Body and fender repair and refinishing is emphasized in this course.
Sem. I, II. Credit: 2
Mr. Good, Mr. Kranzusch (2-6)

Industrial Education 247 Auto Mechanics

Prerequisites: Industrial Education 245.

Modern shop practices in engine tune-up and in overhauling and repairing auto engines and their accessories. Reboring and honing cylinders; fitting new pistons, rings and piston pins; reseating, grinding, and testing valves, repairing and adjusting carburetors.
Sem. I, II. Credit: 2
Mr. Good, Mr. Kranzusch (2-6)

Industrial Education 341 Auto Mechanics

Prerequisites: Industrial Education 245, 247.

Electrical equipment of the automobile. Construction, principles of operation, adjustments and repair of the various types of circuits, operating units, and storage batteries. Practice in diagnosing, locating, and repairing electrical troubles on live cars.
Sem. I, II. Credit: 2
Mr. Good, Mr. Kranzusch (2-6)

Industrial Education 451 Auto Mechanics

Prerequisites: Industrial Education 245, 247, and 341.

For teachers and prospective teachers of auto mechanics, giving experience in the preparation of instructional units for junior and senior high schools and for vocational schools. Selection and organization of teaching material, shop lay-out, student routing and shop management, equipment selection, dispensing and checking of shop tools and equipment.
Sem. II. Credit: 2
Mr. Good, Mr. Kranzusch (4-2)

Industrial Education 243 Foundry

Molding, involving cutting and tempering molding sand preparatory to ramming bench and floor molds. Core making involving making and baking of cores for molds. Cupola practice, including operation of the cupola and the handling and pouring of molten metal. Selecting, mixing, and melting pig iron and machinery scrap to secure machinable qualities in the castings. Two or three heats of cast iron. Melting and pouring of brass and aluminum in a crucible.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 337 Foundry

Prerequisite: Industrial Education 243.

Advanced molding projects, match plates for production work; Metallurgy of the foundry. Several heats of iron, brass, and aluminum.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 113 Machine Shop

Construction and operation of the lathe, milling machine, drilling machine, shaper, and grinding machine. Shapes of the cutting tools, grinding, setting, and operating. Calculations to obtain the correct feeds and speed for cutting various metals. Related technical information. Projects involve basic processes on each machine.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 235 Machine Shop

Prerequisite: Industrial Education 113.

Spiral gear cutting and rack cutting involving the use of the milling machine. Internal and external square thread cutting on the lathe. Cylindrical grinding in the universal grinder. Stress upon related information pertaining to machine shop work.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 237 Machine Shop

Prerequisites: Industrial Education 235 and 227.

Worm gearing, tool and cutter grinding, and problems in tool making. Planning, drilling, and tapping cast iron machine parts. A survey of the trade is made with view to organizing material for teaching. Material uses and cost studies.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 435 Machine Shop

Prerequisite: Industrial Education 237.

Bevel-gear cutting, punch and die making, internal grinding, problems in tool making. Studies of selection of appropriate materials. Organization of project material and instructional units.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 115 Sheet Metal

Fundamental machine and hand tool operations; care, use, and adjustment of sheet metal equipment; the development of simple patterns involving parallel and radial lines; direct layout and short methods; study of markets, manufacture, buying, etc. of equipment and supplies.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

Industrial Education 239 Sheet Metal

Prerequisite: Industrial Education 115.

Drafting irregular patterns by means of triangulation; triangulation using the top view in the layout; triangulation using both top and side view in the layout; triangulation using the side view only in the layout; shop practice in the make-up of irregular fittings from various fields of sheet metal work.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

Industrial Education 241 Sheet Metal

Prerequisites: Industrial Education 115, 239.

A course for advanced students in sheet metal work, involving further practice in pattern drafting and shop work, including irregular fittings developed by either the triangulation, parallel, or radial line method. Projects dealing with cabinet construction as applied to sheet metal work. Fundamentals of aircraft sheet metal work including a study of materials and equipment, as well as instruction and practice in layout, cutting, drilling, burring, hand riveting and air gun riveting.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

Industrial Education 333 Sheet metal

Prerequisites: Industrial Education 115, 239, 241.

Aircraft sheet metal work involving instruction and practice in such operations as raising, forming, stretching, shrinking, bending, etc. Also the working of copper, brass, aluminum, pewter, monel metal and others; their uses and application in sheet metal work; projects involving soft and hard soldering, spinning, raising, chasing, seaming, piercing, etching, coloring, etc; study of related and technical information, markets, and supplies.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

Industrial Education 335 General Metal

Prerequisite: Industrial Education 113.

General shop of the trade group type. Organization, courses of study, layouts, equipment, operation, uses of instructional material, supplies. Shop work in selected projects representing bench metal, forging, heat treating, machine shop, oxy-acetylene welding.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

Industrial Education 445 Oxy-acetylene Welding

Prerequisite: Industrial Education 335.

Instruction and use of equipment such as generators, manifolds, tanks, gauges, roches, etc. The study of safety from the welder's view point. Much time is devoted to the study of welding of all common metals. Both hand and machine cutting of steel is done by the student. Welds are tested and checked. A study is made of filler rods, fluxes, etc.
Sem. I, II. Credit: 2
Mr. Keith (2-8)

Industrial Education 457 Electric Arc Welding

Prerequisite: Industrial Education 335.

A study is made of the different types of arc welding equipment, their characteristics and operation, safety, symbols, types of electrodes, etc. Actual welding practice involves the preparation of joints, striking and manipulation of the arc in various weld positions, welding of the common metals with different types of welding machines, hand and machine cutting, destructive and non-destructive testing of welds.
Sem. I, II. Credit: 2
Mr. Keith (2-8)

Industrial Education 335 General Metal

Prerequisites: Industrial Education 335 and 455.

Continuation of General Metal I. Advanced work in ornamental and tool forging, oxy-acetylene welding, power hammer work, bench metal, electro-plating, heat treating, and the use of ceramic tile in combination with metal. A study is made of new machines, tools, and metals, their manufacturing costs, etc.
Sem. I, II. Credit: 2
Mr. Keith, Mr. Chinnock (2-8)

PRINTING

Industrial Education 117 Elementary Composition

Elements of composition, stonework, and platen press work. Graded projects in straight composition involving basic operations of job printing, proof reading. Supplementary lectures, demonstrations, and tests given in definite teaching units.
Sem. I, II. Credit: 2
Mr. Baker, Mr. Carlsen (2-8)

Industrial Education 225 Advanced Composition

Prerequisite: Industrial Education 117.

Advanced composition. Problems in display composition, stonework, and platen press work. An introduction to commercial problems and jobs, through the use of typical projects. Allows gain in skill as craftsman. Supplementary lecture periods devoted to typographical design and its application.
Sem. I, II. Credit: 2
Mr. Carlsen (2-8)

Industrial Education 257 Machine Composition

Prerequisites: Industrial Education 117, 255.

Study of intertype and linotype machines. Includes study of the complete mechanism, care, and operation of typesetting machines. Time divided between mechanism and practice operating. Sufficient time is spent on study of mechanism of the machine to give complete knowledge of principles and care.
Sem. I, II. Credit: 2
Mr. Baker (3-7)

Industrial Education 351 Printshop Mechanics

Prerequisites: Industrial Education 117, 255, 257, 459.

Course designed to cover study of adjustments and care of all machines found in the school and job shop, including platen and cylinder presses, automatic feeders, stereotype equipment, linotype, intertype, monotype, paper cutters, stitchers, and folders. Operation tests on each. Study and reference will include special work and storage equipment.
Sem. I, II. Credit: 2 or 4
Mr. Carlsen (5-5)

Industrial Education 259 School Publications

Prerequisites: English Composition 102a and b.

Prepares teachers to handle school periodicals as a part of their work. Study of school newspapers, magazines, and annuals from the viewpoint of organization and operation. Elements of journalism and their application from the viewpoint of the advisor. The Stoutonia, the weekly college newspaper, and morgue used as a laboratory.
Sem. I, II. Credit: 2
Mr. Baker

Industrial Education 361 Printing Design

Prerequisites: Industrial Education 117, 255.

Application of elementary art and design to practical printing. Study of type design, commercial layouts, colors, papers, cover designs, folders, and booklets. Lectures, shop work and drawings. Application of printing techniques to design.
Sem. II. Credit: 2
Mr. Baker (4-6)

Industrial Education 449 Printing Economics

Prerequisites: Industrial Education 117, 255.

Acquaint the teacher of printing with economic problems of both commercial and school print shops. Shop organization and management, purchasing of equipment and supplies, shop layouts, and cost estimating. Lectures supplemented by references and practical problems. Part time devoted to organization of material for instructional purposes, and development of printing tests.
Sem. I, II. Credit: 2
Mr. Baker (6-4)

Industrial Education 459 Presswork

Prerequisites: Industrial Education 117, 225.

Practical problems and operation of platen and cylinder presses, and automatic feeders, imposition of large forms. Research problems in presswork. Field study of modern presses, multiple-color, rotary, rotogravure, offset, and automatic feeding machinery. Problems in bindery operations involving bindery machinery. Study of paper and inks and their importance in the press room. Field trips.
Sem. I, II. Credit: 2
Mr. Carlsen (10)

Industrial Education 363 General Graphic Arts

An elementary course in basic graphic arts reproductive processes intended for those wishing to offer general exploratory and informational units to classes of secondary school levels. A correlation between the fine and practical arts. Lecture, demonstration and production units are offered in letter press, stereotype, wood and resilient block-cutting, lithography, etching, silk screen, stencil, offset, ditto, engraving, aquatints, embossing, layout, paper-making, book binding, photo engraving, and steps in the production of a book. Emphasis on development of instructional material.

Mr. Baker Credit: 2-4
(2-8)

Industrial Education 359 Cooperative Industrial Printing

Prerequisites: Industrial Education 117, 255, or equivalent.

Full time work in a commercial shop under the supervision of a coordinator. Campus cooperative printing consists of production work at the college press under shop conditions. No outside preparation. Time required equivalent to double regular shop courses. On request for qualified students. Additional credit by arrangement for qualified students.
All year
Mr. Baker, Mr. Carlsen
Credit: 2-4
(2-4)

Industrial Education 557 Experiments in Printing

Prerequisite: Graduate standing.

Work in this course is based on individual projects affording opportunity to experiment in the field of graphic arts in advance of opportunities offered in regular courses. Projects selected must contain approved factors of educational significance, technical accuracy, and be of a type not previously covered by the individual. Definite use of shop laboratories as well as literature is expected. Work is carried on by arrangement and conference and is put in permanent form by means of a term paper.
S.S.
Mr. Baker
Credit: 2

WOODWORK

Industrial Education 107 Hand Woodwork

Study and performance in sample elements and basic fundamentals and processes: tool and material nomenclature; fitting, setting, adjusting, and manipulating hand tools; getting out stock; laying out and making some of the common joints; construction of one or more small projects; identification of wood and measurements of lumber.
Sem. I, II.
Mr. Hansen
Credit: 2
(3-7)

Industrial Education 131 Machine Woodwork

This is a basic course in sample elements with primary emphasis on operation of stationary and portable woodworking machines. Combinations of operations are applied coordinated with safety instruction. Practical methods consistent with quality production are developed. Instruction and experience will deal with use of working drawings, stock cutting bills, rods, patterns and jigs in machining parts for some specially selected and designed project. Wood identification, lumber scaling and tallying and shop vocabulary are also stressed.
Sem. I, II.
Mr. Hansen
Credit: 2
(3-7)

Industrial Education 215 Cabinet Making

Prerequisite: Industrial Education 311 for those who plan to take both 311 and 215.

Instruction and experience in tests and records of moisture; shrinkage and expansion of wood; atmospheric temperature, relative humidity and dew-point indoors and out; ratios of atmospheric conditions to moisture; expansion and contraction of wood; case-hardening; glue and gluing; classification of construction and characteristic relationship of structural members in projects; classification of detailed shapes and measurements; and correct use of joints. Opportunity is available to build project selected in Industrial Education 311.
Sem. I, II.
Mr. Hansen
Credit: 2
(3-7)

Industrial Education 311 Design in Furniture and Case Work

Study and instruction in laws, theories and principles of aesthetic and structural design. Classification and selection of regular and supplementary projects for given educational levels and objectives. National standard measurements of nominal and actual dimensions of lumber and hardware. Making isometric sketch and working drawings for at least one regular project for a specified educational level. Full size models of parts to stimulate visualization. Billing material and writing a job plan. The selected project should be made in later courses when possible. A field trip is included.
Sem. I, II.
Mr. Hansen
Credit: 2
(3-7)

Industrial Education 312 Cabinet Making

Prerequisites: Industrial Education 107, 131, 311, 215, and arrangement with instructor.

Methods, procedures, techniques and standards in open and enclosed construction; making and fitting doors and drawers; hanging doors; fitting hardware and trim; veneers and veneering. Provision for continuation of large or complicated projects with less formal content and more freedom for self-expression.
Sem. I, II.
Mr. Hansen
Credit: 2
(2-8)

Industrial Education 313 Design in Furniture and Case Work

Prerequisite: Industrial Education 311 and arrangement with instructor.

Extension and expansion of Industrial Education 311. Provides for additional instruction and experience in designing, laying-out and making rods, patterns, jigs, forms, or other fixtures used in constructing the project. Designing and laying out irregular shaped machine knives. Writing some instruction sheets for specific cases and conditions. Round-table discussions analyzing factors in proposed plans.
Sem. I, II.
Mr. Hansen
Credit: 2
(2-8)

Industrial Education 411 Cabinet Making

Prerequisites: Industrial Education 107, 131, 311, 215, 312 and arrangement with instructor.

The course includes forms, arrangements and expressions in requisitions, orders, invoices, bills of lading, stock bills, inventories and shop detail sketches; buying care and use of supplies and equipment; teaching problems, occupational opportunities; shop layouts and tool and supply systems; personnel organization and management. Projects not completed in previous courses may be continued. Extra curricular use of the shop is allowed in and after this course.
Sem. I, II.
Mr. Hansen
Credit: 2
(2-8)

Industrial Education 219 Carpentry

Prerequisites: Industrial Education 107, 131.

Surveying and staking out for buildings; concrete forms construction, floor framing, wall framing, and roof framing in actual house construction; the steel square is used in roof framing; sheathing, shingling and insulating; correlation between workers in carpentry and between the building trades. Reference assignments and "round table" discussion.
Sem. I, II.
Mr. Paul C. Nelson
Credit: 2
(2-8)

Industrial Education 319 Carpentry

Prerequisites: Industrial Education 107, 131, 219.

Review of equal pitch roof framing; study and construction of unequal pitch roof framing; cornice construction, porch framing and finishing; exterior trimming; scaffold construction; study of building materials; quantity surveying and ordering materials; projects for teaching carpentry; workers in the carpentry trades; reference assignments and "round table" discussions.
Sem. I, II.
Mr. Paul C. Nelson
Credit: 2
(3-7)

Industrial Education 421 Carpentry

Prerequisites: Industrial Education 107, 131, 219, 319.

Interior finishing; elements of stair building; polygonal and curved roof and ceiling construction; structural design in framing; structural and design in finishing; organization teaching material and shop equipment for courses in carpentry; supervision of a carpentry teaching job; carpentry as a life work; reference assignments and reports.
Sem. I, II.
Mr. Paul C. Nelson
Credit: 2
(10)

Industrial Education 116 General Woodwork

Prerequisites: Industrial Education 107, 131.

A general shop course which provides (1) information and practice in several basic kinds of woodwork and (2) observation and study of a revolving plan for general shop instruction. The nine-week course is divided into three three-week units and the

class into three groups. Each group changes to a new unit of instruction at the end of three weeks. The range of work covered includes elementary upholstery, layout work for wood construction, pattern and form making, plastic and cement casting and finishing.
Sem. I, II. Credit: 2
Mr. Paul C. Nelson (2-8)

Industrial Education 263 Millwork

Prerequisites: Junior or senior rating and arrangement with instructor.

Limited to two students each quarter. The work deals primarily with millwork products such as sash, doors, molding, window and door frames, built-in cabinet work which furnish problems for correlation with architectural drawing, carpentry, contracting and line yards in a building trades cycle. Milling stock for other classes and departments.
Sem. I, II. Credit: 2
Mr. Hansen (2-8)

Industrial Education 267 Millwrighting

Prerequisite: Senior rating and arrangement with instructor.

Limited to two students each quarter. This course includes care and maintenance of woodworking machines; improvements in equipment; power saw and knife fitting; band saw brazing; alignment and adjustment of machine parts; babbeting; fitting and adjusting bearings; power transmission problems; belt splicing; making molding knives; cutting angles; backing clearances; grinding bevels; cutting speeds; rates of feed and shop layouts.
Sem. I, II. Credit: 2
Mr. Hansen (2-8)

Industrial Education 371 General Woodwork

Prerequisites: Industrial Education 117, 131, 116.

This course is a follow up of General Woodwork, Industrial Education 116, which offers further expansion in kinds and choices of woodwork. Experiences gained in previous courses are broadened through application in new combinations and in a variety of selected projects. General shop planning and shop improvement are studied. Shop and classroom equipment is planned, designed and constructed as individual or group projects. Opportunities are offered for developing individual interests. Blue prints, photographs and other illustrations of the class work are prepared and made available to the students.
Sem. I, II. Credit: 2
Mr. Paul C. Nelson (2-8)

Industrial Education 440 General Materials Supplementing Wood

The purpose of this course is to develop ability to work with a wide range of materials supplementing traditional wood. Some of these are: plywood, presswood, fiber, plastics, fiber board, cork, linoleum, sheet rubber, asbestos, etc. Emphasis is placed on selection of materials in terms of suitability, appearance and use of the project. Devices are studied and methods are practiced in cutting, shaping, assembling and finishing these materials.
Sem. I, II. Credit: 2
Mr. Paul C. Nelson (2-8)

Industrial Education 211 Aircraft Construction

Building full-size pre-flight training planes, studying aircraft nomenclature, materials, structural designs, airfoils, lofting, etc. Exercises in joint making and gluing to develop tolerances for airworthiness. Building full size airworthy gliders, sailplanes and power airplanes. Shop and laboratory experience is coordinated with science, mathematics, aircraft design and drafting, and CAA requirements.
Sem. I, II. Credit: 2
Mr. Hansen (3-7)

Industrial Education 111 Woodturning

Prerequisites: Industrial Education 107, 131, 118.

Spindle turning-concentric and offset. Face plate and chuck turning. Mandrel turning. Segmental and other built-up work. Boring and internal turning. Split turning, cutting spirals. Fluting. Inlaying. Applying finishes to turned articles. Shaping and sharpening woodturning tools. Standard and special turning tools. Modern production methods and machines for woodturning.
Sem. I, II. Credit: 2
Mr. Paul C. Nelson (2-8)

Industrial Education 447 Cooperative Woodwork on Campus

Prerequsite: Arrangement with instructor.

The course includes production problems in building equipment and teaching-demonstration samples and models for the mill room and cabinet shop. Projects which have limited value in experience and training are excluded.
Sem. I, II. Credit: 2
Mr. Hansen (1-9)

Industrial Education 448 Cooperative Woodwork in Industry

Prerequisite: Arrangement with instructor.

Through affiliations with industry, opportunities may be available for practical experience in woodwork manufacturing plants in nearby cities. Conferences with instructors and the director are necessary before arrangements can be made.
Sem. I, II. Credit: 2
Mr. Hansen

Industrial Education 209 General Finishing

Study and practice in application and uses of basic finishes for composition material, plastics, wood, and metal. Methods of refinishing. Study and practice in color theory. Practical experience with new types of finishing materials. Modern practice in the use of spraying equipment. Application and use of baked finishes.
Sem. I, II. Credit: 2
Mr. Wigen and others (2-8)

Industrial Education 221 Painting and Decorating

Prerequisite: Industrial Education 209.

Study and practice in color theory, color mixing and applications in various mediums. Instruction sheets and pupil selection of special type finishes and methods; two-tone antique methods, stenciling, striping, glazing, blending, hazing, marbling, etc. Panels of special wall finishes, stippling, blending, texturing with plastic materials. Production work with the use of the spraying equipment. Experience with basic metal finishing methods and materials.
Sem. I, II. Credit: 2
Mr. Wigen and others (2-8)

Industrial Education 225 Patternmaking

Prerequisites: Industrial Education 107, 227.

Wood patterns of machine parts for casting in iron, brass, and aluminum. Study of types of work performed by patternmakers. Patternmaking allowances; shellacking a pattern to convey information to a molder. Patterns involving solid, split, and segmental construction; core boxes for whole and half cores; right and left hand, interchangeable baked sand cores. Patternmaking materials. Visit to a foundry.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

Industrial Education 325 Patternmaking

Prerequisites: Industrial Education 225, 243.

Pattern for sheave wheel; bevel gear blank; mounted and gated patterns for production work; irregular shaped patterns and match plates; two inch soil pipe fittings involving bench lathe work and built up core box construction. Segmental pulley construction involving spokes, webs, and bosses. Survey of patternmaking and organization of instructional material.
Sem. I, II. Credit: 2
Mr. Milnes (2-8)

BUILDING CONSTRUCTION

Industrial Education 249 Bricklaying

Elements of bricklaying, including spreading of mortar, and the raising of corners and building walls in the various bonds, chimneys, piers, walling in frames, turning arches, building fireplaces. Preparation of instructional material; analysis of the trade for instructional units that may be used in industrial education. Demonstrations and class work carried on under actual trade practice. Organization of teaching units for the intermediate and upper levels in high schools with an approved state outline. Vocational aspects given due consideration.
Sem. I, II. Credit: 2
Mr. Ray (1-9)

Industrial Education 251 Bricklaying

Prerequisite: Industrial Education 249 or its equivalent.

A continuation of Bricklaying 249 in advanced work, speed problems, motion study.

Problems planned to involve units in the trade necessary for working under field conditions. Related work, drawing detail problems. Organization of instructional units for specific cases. Recommendations for outside jobs of good instructional value. Study of equipment, shop layouts, trade tests, scaffolding, safety and hygiene. Blueprints and outlines issued for reference in instructional planning.
Sem. I, II. Credit: 2
Mr. Ray (1-9)

Industrial Education 354 Concrete Work
Basic elements of concrete work; mixtures, foundations and footings, sidewalks, curbs and gutters, fence and garden posts, flower pots, benches sweep work, moulds, form work, terrazza and inlay work. Ornamental concrete work suitable for high school unit and general shops. Outline of instructional units and phases of work emphasized in elementary work with blueprints of typical problems.
Sem. I, II. Credit: 2
Mr. Ray (1-9)

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APPLICATION FOR ADMISSION

I hereby apply for admission to The Stout Institute to begin_____

_____. Please send me the necessary blanks for my high school credits.

Please address—

Name _____

Post Office Address _____

_____

Name of Parent or Guardian _____

Address of Parent or Guardian_____

_____

Date of Birth (month, date, year) _____

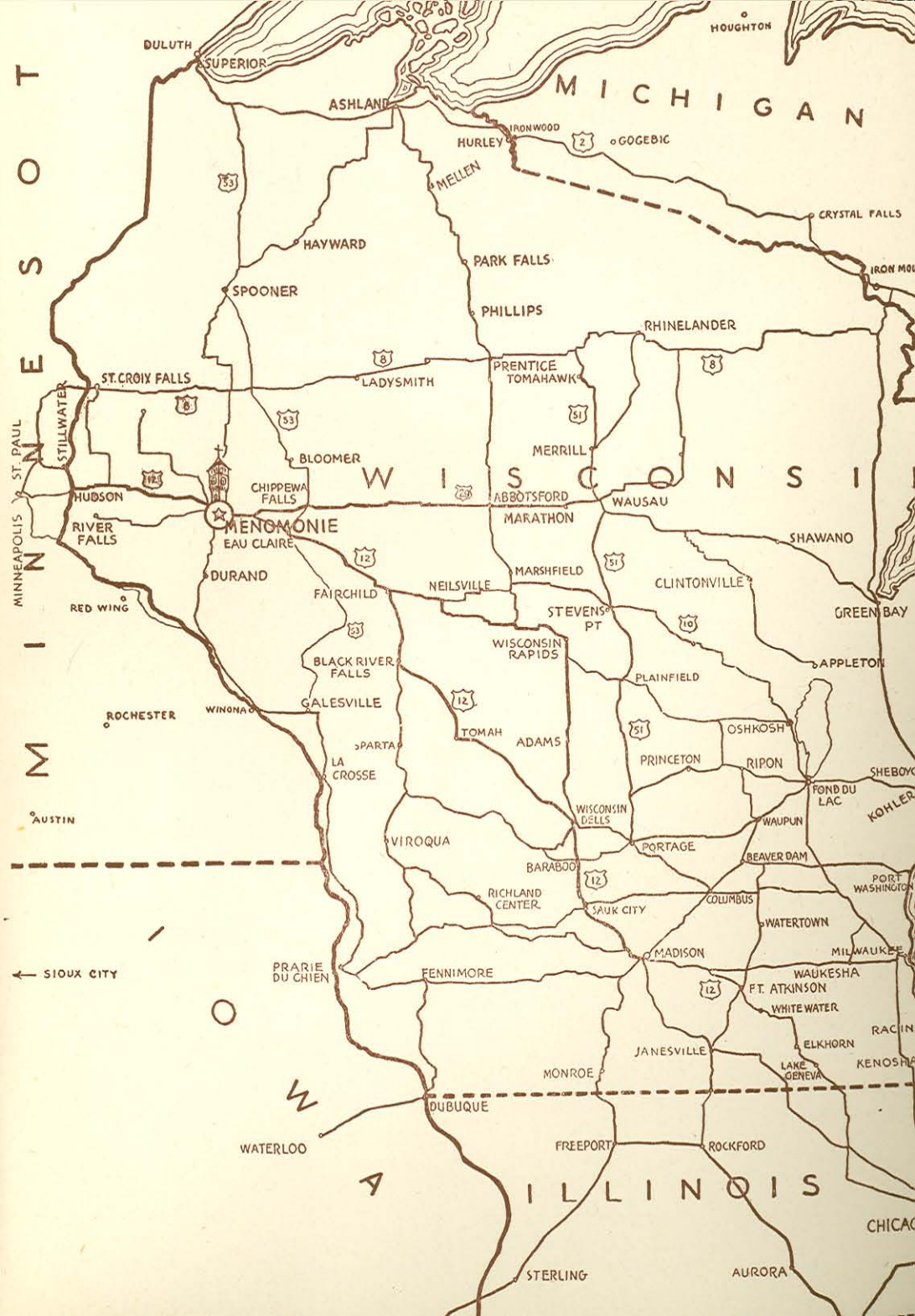
High School attended _____

Year graduated _____

Other schooling or experience _____

_____

_____

Signed _____

Date _____